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# Bulletin Georgia State College of Agriculture



## Annual Report 1916-17

Andrew M. Soule, President

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# Georgia State College of Agriculture

University of Georgia, Athens, Georgia

## Administrative, Technical and Extension Staff

ANDREW M. SOULE	President
JOHN R. FAIR	Professor of Agronomy
MILTON P. JARNAGIN	Professor of Animal Husbandry
T. H. McHATTON	Professor of Horticulture
LEROY C. HART	Professor of Agricultural Engineering
W. A. WORSHAM, JR.	Professor of Agricultural Chemistry
THOMAS W. REED	Registrar
WILLIAM M. BURSON	Professor of Veterinary Medicine
†*J. PHIL CAMPBELL	Director of Extension
*GUY W. FIROE	Supervisor Extension Schools
JAMES B. BERRY	Professor of Forestry
†*MARY E. CRESWELL	State Supervisor, Home Economics
*L. M. CARTER	Junior Professor, Soil Chemistry
*DAVID D. LONG	Soil Expert in State Survey
GEORGE A. CRABB	Junior Professor of Agronomy, In Charge of Soils
†*JOHN K. GILES	State Supervisor, Agricultural Clubs
*J. W. FIROE	Junior Professor of Horticulture
LOY E. RAST	Junior Professor of Agronomy, In Charge of Cotton Industry
ETHEL REESE	Secretary to President
*MARION W. LOWRY	Adjunct Professor of Soil Chemistry
O. T. GOODWIN	Adjunct Professor of Dairy Husbandry
†*JAMES E. DOWNING	Assistant State Supervisor Pig Clubs
†*R. R. CHILDS	Scientific Assistant in Agronomy
*S. H. STARR	Adjunct Professor of Farm Management
*E. C. WESTBROOK	Field Agent in Agronomy
EARL C. WELCH	Instructor in Agriculture Engineering
†*G. V. CUNNINGHAM	Assistant State Supervisor County Agents
†*WILLIAM BRADFORD	Assistant State Supervisor Agricultural Clubs
*R. M. GRIDLEY	Field Agent in Animal Husbandry
*G. L. BIGFORD	Scientific Assistant in Animal Husbandry
*W. H. HOWELL	Scientific Assistant in Dairy Husbandry
†*LOIS P. DOWDLE	Assistant State Supervisor, Home Economics
*PAUL TABOR	Field Agent in Agronomy
WILLIAM S. DILTS	Instructor in Poultry Husbandry
†*MRS. BESSIE S. WOODS	Assistant State Supervisor, Home Economics
P. O. VANATTER	Superintendent Field Experiments
A. P. WINSTON	Foreman of College Farm
†*M. C. GAY	Field Agent in Marketing
†*W. F. WHATLEY	District Supervisor County Agents
†*J. G. OLIVER	District Supervisor County Agents
†*A. A. STRATFORD	District Supervisor County Agents
†*L. S. WATSON	District Supervisor County Agents
†*J. G. WOODRUFF	District Supervisor County Agents
†*R. F. WHEELCHER	District Supervisor County Agents
*ELMO RAGSDALE	Field Agent in Horticulture
†*GUY R. JONES	Field Agent in Agricultural Engineering
*J. P. HART	General Field Agent
HENRY T. MADDUX	Editor
J. E. SEVERIN	Instructor in Veterinary Medicine
W. C. BURKHART	Instructor in Veterinary Medicine
*MORRIS WILLIAM H. COLLINS	Field Agent in Agronomy
WILLIAM OLIN COLLINS	Instructor in Agr. Chemistry
I. W. ARTHUR	Instructor in Animal Husbandry
†*J. V. PHILLIPS	Senior Drainage Engineer
†*G. R. SKINNER	Scientific Asst. in Dairy Husbandry
†*W. H. ALLEN	Field Agent, Poultry Clubs
†*H. L. BROWN	Scientific Assistant in Animal Husbandry
*MRS. E. M. ANDREWS	District Agent, Home Economics
†*HOYLE SKINNER	District Agent, Home Economics
NELLE M. REESE	Librarian
C. B. SWEET	Foreman of Greenhouse and Grounds
C. N. KEYSER	Tutor in Horticulture
CECIL N. WILDER	Tutor in Agricultural Chemistry
P. R. HILL	Fellow in Agronomy
OLIVE BELL	Clerk and Stenographer
*MRS. PEARL STOREY	Clerk and Stenographer
NORA SAYE	Clerk and Stenographer
ANNIE MAY PENLAND	Clerk and Stenographer
*MRS. E. T. EPPS	Clerk and Stenographer
AGNES HADDOCK	Clerk and Stenographer
*ELIZABETH DOWDLE	Clerk and Stenographer
*MRS. MAY THORNTON	Mailing Clerk
*MYRA WILHITE	Multigraph Operator
*FERN THOMPSON	Stenographer
*MAGGIE D. ROSE	Stenographer
*MARGARET COX	Stenographer

\* In Extension Service.

† In Cooperation with U. S. D. A.

# Report of the President, State College of Agriculture and the Mechanic Arts

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To the Honorable Board of Trustees  
of the Georgia State College of Agriculture.

Gentlemen:

It is my privilege to transmit for your information my tenth annual report on the work accomplished by the Georgia State College of Agriculture and the Mechanic Arts for the college year 1917-1918.

The year has been one of unprecedented prosperity due to the record prices obtained for cotton and all other products of Georgia farms. As a result, money has been comparatively abundant and the tendency to spend it for the purchase of luxuries as distinct from essentials more marked than ever before. Under the circumstances it has been difficult to convince our people of the gravity of the existing situation and the dangers which are likely to face us in the days to come. Only recently has it been generally appreciated that the great amount of gold brought into this country as a result of the world war has materially lessened the purchasing power of the dollar and aggravated what may be appropriately termed "the high cost of living." Thus, while it would appear that the farmer is likely to receive maximum prices for his crops for some time to come, he is, relatively speaking, no better off than when commodities were lower because of the ever-increasing cost of those things which he must of necessity buy for the maintenance of his farming operations on an effective basis. Since our beloved country has joined forces in the titanic struggle in progress across the waters great sums of money must necessarily be subscribed to our war loans. Hence, economy must be made the watchword for the present and the future, and a systematic effort made to impress this fact upon every citizen in order that the nation may effectively meet the exigencies of the situation by which it is now confronted. Owing to the high price of foodstuffs and the comparative scarcity of the same throughout the world, it is self-evident that the effort of an institution such as this should be concentrated in so far as practical on the questions of food production and conservation. In a letter to the Convention of the National Agricultural Society, President Wilson states: "At the present time it is our plain duty to take adequate steps that not only our own people be fed but that we may, if possible, answer the call for food of other nations now at war. In this greatest of human needs, I feel that the American farmer will do his part to the uttermost. By planting and increasing his production in every way possible, every farmer will perform a labor of patriotism for which he will be recognized as a soldier of the commissary adding his share to the food supply of our people."



The accomplishments of the institution along this line have been considered noteworthy by many, and on this account what has been done has been presented in considerable detail in another part of this report. Technical schools, because of the supreme importance of applied science in the present war, have already been accorded a dominating position as material aids to the government in the solution of the pressing problems which it is now being called on to meet. Hence, it has been urged by savants everywhere that courses in medicine, agriculture and engineering be maintained, enlarged and varied to meet the needs of students already enrolled or who may be enrolled later so as to enable them to serve their country most effectively. Judged by the experience of foreign countries it is plainly the duty and the privilege of technical institutions such as ours to be aggressive in encouraging and inducing the largest number of young men who are below the age of selective draft or who have been rejected for any purpose to more thoroughly equip and prepare themselves for special duty by availing themselves of the courses provided in an institution of this type. The government through the President and the Secretaries of War and Agriculture has indicated this to be one of the most patriotic and necessary services which can be rendered the United States at this time. The wisdom of this advice is exemplified by the fact that thousands of men who have received military or technical training in agriculture and engineering in the Land-Grant Colleges are already enrolled in the service of the United States and must be depended on to form the nucleus around which an efficient system of leadership in these two primary occupations is to be developed. Men of vision perceive that upon the close of the war the fiercest industrial struggle of the ages will occur by reason of the changed order of events which it has brought about in European countries. Apparently individualism is doomed to disappear and concerted action and coördination of effort on the part of nations determine their commercial and industrial status and their success in securing and maintaining that part of the world's trade to which they may reasonably aspire. If this be true it is more important than ever that the special service which technical institutions can render be immediately recognized and the number of students they enroll greatly increased so that the United States may be prepared at the end of the war through expert leadership to maintain her position as a producer and distributor of food-stuffs, raw materials and manufactured articles.

#### Attendance.

The enrollment for the year was 981, which constitutes a record in the matter of attendance up to the present time. Of this number 229 were in the College of Science and Engineering and 752 in the College of Agriculture. The Freshman class of the College of Agriculture was not only large but the men were well prepared and have made a commendable record. There is a growing interest in



our special and short courses which emphasizes the tendency of people of maturity to take advantage of the acceptable training which the College provides through such courses. Ten men are studying for the master's degree. There are twenty-two men in the Senior class well prepared to aid their country in the present crisis. The personnel of the student body is very satisfactory and certainly is improving from year to year. I am glad to say that most of the boys coming to us have had some farm experience and are thus prepared to assimilate our courses of instruction to better advantage than those who are lacking in this respect. There is an evident tendency for a larger number of boys to enter the College of Agriculture who have grown up in the larger towns and cities of the state and it will probably be necessary before long to require these men put in their holiday seasons on selected and approved farms in order that they may secure the proper viewpoint and possess the necessary experience with reference to the applied side of agriculture.

I desire to again thank the Board of Trustees for the wisdom it has shown in aiding us in maintaining high entrance and graduation requirements. At the risk of an apparent impropriety, I beg to say that this action on your part has placed the institution in an enviable position in the eyes of educators throughout the country.

The following table shows the enrollment in the College of Agriculture for the past decade:

#### Student Enrollment by Years.

Year	Long Courses	Short Courses	Total
1908	67	104	171
1909	62	124	186
1910	98	100	198
1911	115	110	225
1912	161	66	227
1913	185	165	350
1914	182	284	466
1915	191	350	541
1916	200	219	419
1917	209	543	752
Total	1470	2065	3535

Increase in short courses in nine years-----422 per cent.  
 Increase in degree courses in nine years-----212 per cent.  
 Increase in all courses in nine years-----339 per cent.

You will observe that 1470 long course students have received instruction during that period, and 2065 short course students, making a total of 3535. The increase in the short courses in ten years approximates 422 per cent; in the degree courses, 212 per cent; and in all courses, 339 per cent. A part of the increased enrollment for the year is attributable to the fact that the time of holding the boys' and girls' short courses was changed from January to August. Necessarily their names were not included in last year's register, but properly appear in the current issue.

Three hundred scholarships for the boys' and girls' short courses

have been obtained. These courses will be in progress from July 10 to 20 inclusive. The foregoing figures do not include the teachers who received instruction at the hands of members of the staff during the Summer School, nor does it include any record of the persons receiving instruction at our extension schools or at teachers' and farmers' institutes, or the state and district fairs. One must consider the numbers reached through our long, special and extension courses, to properly appreciate the great progress which has been made in Georgia in the matter of instruction in agriculture in the past decade.

### **Extension Teaching.**

During the three winter months six extension schools were held at the district agricultural schools located at Statesboro, Tifton, Americus, Barnesville, Monroe and Madison. These schools were selected because they are actively coöperating with us in the maintenance of county or district agents. The total attendance was 4250 persons. Systematic instruction was carried forward at each one of them for a week, several carloads of laboratory and exhibit materials being sent to each place in order that the instruction might be made more graphic, definite and applied. The large number of persons who took advantage of these courses indicates the esteem in which this work is held. We have been petitioned to continue and extend these schools very materially another year. Our ability to do so is limited by the finances at our command and the comparatively few members of our staff who can give the necessary time and attention to the work, as it must be carried on while the College is in session. The value of these schools can hardly be over-estimated as they provide a medium for the general dissemination of knowledge which could otherwise not be conveyed to the people. The numbers in attendance indicate the thirst for specific knowledge which the farmers and their wives are displaying in all parts of the state.

### **Alumni.**

One hundred and nineteen men have received agricultural degrees since the College was reorganized. The number of graduates in the service of the College as instructors, extension workers or county agents is sixty-two, and the number who did not complete the degree course, eighteen, making a total of eighty. Practically every graduate of this institution is at work in the state in some capacity related to the progress and development of its agriculture. It is naturally a source of gratification that the institution has been able to utilize and turn the energies of its graduates into constructive and purposeful service for the advancement of Georgia's primary industry.

The agriculture of the south and the nation as a whole is undergoing a remarkable change. The lackadaisical methods of the past can no longer be relied upon as the present crisis in our food supply brings sternly to our attention. The days of "farming on velvet,"

as we have been pleased to call them, are past. The cream of that rich store of reserve plant food, which Providence spent several centuries in accumulating for the benefit of the American farmer, has been dissipated and we must now discover how to cultivate what our grandsires properly regarded as the subsoil. Our agriculture faces a difficult and crucial period, for the solution of the problems by which it is now confronted can only be attained through the application of scientific principles to the task.

I have shown in previous reports that thousands of trained experts must of necessity be developed and employed in order that we may rebuild our agriculture along constructive and essential lines. It is to be hoped that our people realize the gravity of this situation and will direct their energy and effort towards encouraging the necessary number of young men to train themselves for leadership of this type in order that we may not find ourselves in the hopeless condition of unpreparedness by which the nation as a whole was confronted upon the outbreak of the war. The advent of the boll weevil and the necessity of devoting a very considerable acreage in the state of Georgia hitherto used for cotton to the growth of a variety of crops suitable for the maintenance of live stock is bound to force radical changes in our present agricultural practice. These will not be easily made unless we train a generation of stockmen, nor will we be able to introduce and utilize new crops as advantageously as we should unless our people are more generally and better informed with reference to their cultivation and management.

There is no problem which confronts the farmer now which does not call for the use of more skill and intelligence than he was required to expend in the past. How can he meet this situation save through possessing the knowledge of the expert or having the expert in a position where he can secure his advice? The College is under constant pressure to enlarge the sphere of its activities. There is a demand for the appointment of agents in counties which do not have them at present. The government is increasing its appropriation for this purpose. The present graduating class displayed a fine spirit of patriotism by volunteering to go into the field and aid in the food production campaign without pay save for their actual expenses. We were enabled to provide for these until July 1st through the help of the Federal Government and generous friends. By permission of your honorable body they were allowed to leave College some weeks ago to take up the duties of county agents. Their action in this matter was most commendable and I hope will not escape your attention. Every properly trained man in the state is already employed and yet we need more leaders along this one line than the College has trained in ten years. If we were fortunate enough to possess five hundred capably trained men and women there would be a place where every one of them could render a most essential service. I call your attention to these facts that through your united effort the people of the state may be informed of the opportunity



open to the young men and women of Georgia along the lines of agricultural development work. It is clear that our basic industries can not succeed without an abundance of cheap raw materials at their command. It is also necessary that industrial workers be fed and maintained on a satisfactory basis at a moderate cost. The present drift of our agriculture, the waste of our soil resources and the failure to produce crops on much of our land which would provide the farmer with a reasonable increment for the time, labor and fertilizers expended thereon do not indicate the early attainment of the end in view.

### Summer Courses.

Through the establishment of summer courses of collegiate grade it has been possible to provide for the utilization of the College plant and equipment and a part of the staff of instructors for approximately eleven months of the year. By this arrangement a valuable service has been rendered the state in enabling men and women to take up the work of graduate and under-graduate courses. A good many of our men desire to take advanced work and thereby specialize in their chosen fields of activity. By the arrangement consummated provision has been made to aid and encourage this worthy ambition. Fees have been reduced to a minimum and will be maintained for another year at the figures indicated in my previous report and approved by you as trustees.

Provision has been made for summer graduate work in agronomy, fertilizers and milk production. Under-graduate courses in agronomy, animal husbandry, horticulture, agricultural engineering, veterinary medicine, agricultural chemistry and poultry husbandry are offered. In the interests of the teachers of Georgia arrangements have been made with the Summer School management for courses in elementary agriculture, high school agriculture, field crops, soils, fertilizers, animal husbandry, manual training, landscape gardening and floriculture. These courses are designed to enable teachers who may wish to qualify for work under the Smith-Hughes vocational bill to obtain a part of the necessary training at a moderate cost. This institution seems to be in better position to afford them the opportunity they seek along the lines indicated than any other in Georgia. For those who wish to become more proficient in club work special courses of instruction have been provided. The boys' and girls' short courses will be held as usual, instruction being offered in soils, fertilizers, rotation of crops, seed selection, live stock, farm machinery, poultry husbandry, anatomy and physiology, home gardening, cooking, sewing, dairying and orchard work. Arrangements for the usual summer course in cotton grading have been made. This has proven to be one of the most popular and attractive courses offered up to the present time. Instruction is based on the official cotton grades prepared by the U. S. Bureau of Standards.

I am again constrained to recommend the desirability of offering

courses in agriculture leading to a doctor's degree. As pointed out from time to time, the state is losing \$100,000,000.00 annually which should be turned into an asset rather than a liability as it is at present. It is absurd to try to make ourselves believe that we can afford to permit this waste to go on. The existing situation should convince us of the folly of such a conclusion. There is an old and trite proverb which says, "Willful waste makes woeful want," and we must pay the penalty for this folly sooner or later. It is impossible for us to take our resources of soil and climate and by the alchemy of the chemist, physicist and engineer make them more serviceable to mankind unless we provide a medium through which the specialized knowledge which is necessary can be obtained. A post-graduate division capable of discovering and adding to our store of knowledge and information of the most fundamental character need not cost over \$10,000.00 a year to establish and maintain. I hope, therefore, that you will include this request in your budget to the legislature and back it up by such systematized work as is necessary to obtain an appropriation of such vital importance to Georgia at the present time.

### Reports of the Several Divisions.

Reports of the professors are presented for your information. An examination of the same will reveal that the duties of a single division now represent in the aggregate a greater volume of work than was performed by the College as a whole ten years ago. I respectfully recommend the careful study and review of these reports by the trustees for I do not think it is possible to convey to you in any other manner the varied, exacting and ever-increasing duties which the several divisions of the institution are now performing. The pressure for assistance along new but thoroughly legitimate lines is such at times as to be little short of discouraging from one point of view; from another, alarming. Leaders of thought and action in the state are thoroughly alive to the value of the work of the College and they are insistent that their different problems be investigated and reported upon. They are exactly right, and I am pleased to say that in many instances the College is able to make a favorable response, but it is manifest that the institution can not continue to expand indefinitely without material additions to its resources in the way of income and specialists to do the necessary work. After nearly a quarter of a century of continuous service in this field it may not be inappropriate for me to say that I feel that our several divisions and the professors and instructors associated therewith have made a really admirable response to the tasks imposed upon them, and I am individually proud of my association with such a capable, energetic and faithful body of workers.

The onerous nature of the work performed by our professors will be better appreciated when I state that they are on duty every day in the week from 8:30 A. M. to 6 P. M. with an hour and a half's

intermission at noon. No regular work is scheduled for Saturday afternoon though most of the division heads hold conferences with their College and field workers at that time. Our professors work for eleven months of the year against nine in many institutions. By classes I find our major divisions are instructing from 273 to 710 men, of which more than 200 are long course students. By subjects the range is from 434 to 1705. The hours of instruction approximate 32 per week. In addition they supervise some special line of work, such as the College farm, the demonstration field, the orchards and grounds, direct such research work coördinated with their divisions. This illustrates my contention that they are busy, faithful and efficient, and worthy of the confidence you have reposed in them.

### Changes in Staff.

Some changes in the staff occurred during the year. This will always be true of an institution employing a considerable number of young men, who when they have attained a certain degree of proficiency are naturally entitled to promotion. Our resources are such that we are unable to compete with other institutions for the services of many of our men whom I do not think it is fair to charge with leaving us simply for a mere advance in salary. A young man who has spent several years in specialization in a given field and is capable and aggressive is entitled to the proper recognition of his qualifications, and while it is exceedingly unfortunate that we at times lose the services of men of this type, we can not expect to keep them unless the state puts us in a position where we can offer them the same facilities and opportunities they might enjoy elsewhere. In this connection it is proper to say that there probably never was a time in the history of the United States when a professor was so poorly paid as at the present moment. Salaries for the most part are stationary and have been so for many years, whereas, the cost of living has increased by not less than fifty to one hundred per cent. In many states better salaries are paid to professors than those we are able to offer in Georgia. The chances are that we will lose, not only an increasing number of young men, but the heads of our more important divisions unless we are able to reward them better for the services they are performing. It would be exceedingly difficult to replace the heads of many of our divisions. This matter is of such grave importance and concern to the future welfare of the College that I feel justified in bringing it to your special attention at this time.

### Resignations.

L. M. Roderick, instructor in veterinary science, resigned to accept a position with the North Dakota Agricultural College.

F. H. Denniss, field agent in dairying, resigned to go to Ecuador, South America.

C. J. Goodell, field agent in animal husbandry, was transferred



to the Washington office by the U. S. Department of Agriculture.

F. W. Crysler, foreman of the greenhouse and grounds, resigned to engage in truck farming in Michigan.

D. J. Taylor, state supervisor of poultry clubs, resigned to engage in farming in Indiana.

C. A. Whittle, editor-librarian, resigned to accept a position with the Southern Fertilizer Association in Atlanta.

J. M. Purdom, editor, resigned to accept a position with the Bureau of Farm Management, U. S. Department of Agriculture.

### Appointments.

Dr. J. E. Severin, D.V.M., Ohio State University, was appointed instructor in veterinary medicine.

I. W. Arthur, B.S.A., Iowa State College, was appointed instructor in animal husbandry.

Dr. W. C. Burkhardt, D.V.M., Ohio State University, was appointed instructor in veterinary medicine.

M. C. Gay, B.S.A., University of Georgia, was appointed field agent in marketing.

M. W. H. Collins, B.S.A., University of Georgia, was appointed field agent in agronomy.

W. O. Collins, B.S.A., University of Georgia, was appointed analyst in the soil survey.

C. N. Wilder, B.S.A., University of Georgia, was appointed tutor in agricultural chemistry.

W. H. Allen, B.S., Connecticut Agricultural College, was appointed supervisor of poultry clubs.

H. L. Brown, B.S.A., University of Georgia, was appointed scientific assistant in animal husbandry.

J. V. Phillips, B.S., Clemson College, was appointed senior drainage engineer.

G. R. Skinner, B.S.A., University of Missouri, was appointed scientific assistant in dairy husbandry.

J. F. Hart, Jr., B.S.A., University of Georgia, was appointed general field agent.

Nelle M. Reese, a graduate of the Illinois Woman's College, was appointed librarian.

C. B. Sweet was appointed foreman of the greenhouse and grounds.

H. T. Maddux, B.S.A., University of Georgia, was appointed editor.

### District and County Agents.

The list of men and women county agents whose appointments have been authorized and confirmed by you is presented for your information.

Wm. Bradford - - - Asst. State Supervisor\_Cedartown.

G. V. Cunningham - - - Asst. State Supervisor\_Tifton.

R. A. Stratford - - - Asst. Dist. Supervisor\_Barnesville.

W. F. Whatley - - - Asst. Dist. Supervisor\_Statesboro.

L. S. Watson - - - Asst. Dist. Supervisor\_Tifton.

J. G. Oliver - - - Asst. Dist. Supervisor\_Americus.

R. F. Whelchel - - - Asst. Dist. Supervisor\_Madison.

J. G. Woodruff - - - Asst. Dist. Supervisor\_Athens.

# County Agents.

County.	Agent.	Post Office.
Appling	Roy Rogers	Baxley.
Bacon	B. J. Head	Alma.
Bartow	Charlie Cox	Cartersville.
Ben Hill	J. T. Pittman	Fitzgerald.
Bleckley	M. G. Boland	Cochran.
Bibb	W. G. Middlebrooks	Macon.
Brooks	Scott Pedrick	Quitman.
Bulloch	W. D. Hillis	Statesboro.
Butts	J. H. Blackwell	Jackson.
Burke	L. C. Strahan	Waynesboro.
Camden	W. R. Smith	St. Marys.
Campbell	S. M. Cown	Fairburn.
Carroll	E. T. Jackson	Carrollton.
Chatham	Andrew Jackson	Savannah.
Chatham	E. A. Williams (col.)	Savannah.
Chattooga	R. R. Petree	Summerville.
Clarke and Oconee	J. G. Woodruff	Athens.
Cobb	D. E. Sawyer	Marietta.
Colquitt	V. L. Collier	Moultrie.
Coffee	G. B. Eunice	Douglas.
Coweta	B. M. Drake	Newnan.
Crisp	J. A. Johnson	Cordele.
Dawson	J. M. Turner	Dawsonville.
Decatur	C. C. Lewis	Bainbridge.
DeKalb	R. S. Hunter	Decatur.
Dodge	R. F. Burch	Eastman.
Dooley	C. B. Culpepper	Vienna.
Dougherty	H. L. Cromartie	Albany.
Douglas	H. N. Kemp	Douglasville.
Early	C. E. Martin	Hilton.
Elbert	D. J. Pitts	Bowman.
Emanuel	D. M. Treadwell	Swainsboro.
Fayette	F. F. Davidson	Fayetteville.
Floyd	J. J. Adams	Rome.
Forsyth	S. J. Smith	Cumming.
Franklin	C. A. Bryant	Royston.
Fulton	Carl Wallace,	
	(court house)	Atlanta.
Fulton	T. G. Chastain,	
	(court house)	Atlanta.
Glynn	J. L. Dunn	Brunswick.
Gordon	J. L. Turk	Calhoun.
Grady	P. H. Ward	Cairo.
Habersham	Geo. H. Firor	Cornelia.
Hall	Eugene Baker	Gainesville.
Hancock	W. W. Driskell	Sparta.
Harris	W. M. Boggan	Hamilton.
Haralson	Thos. A. Hutcheson	Buchanan.
Hart	W. W. Clark	Hartwell.
Henry	B. L. Hancock	McDonough.
Heard	Fred D. Jeter	Franklin.
Houston	R. H. Howard	Perry.
Houston	O. S. O'Neal	Ft. Valley.
Irwin	E. P. Drexel	Ocilla.
Jasper	B. E. McElheney	Monticello.
Jeff Davis	A. B. Hursey	Hazelhurst.
Jefferson	J. T. Coffee	Louisville.

Jenkins	H. H. Parrish	Millen.
Jones	G. G. Kemp	Gray.
Laurens	J. B. Tyre	Dublin.
Liberty	Fred Ball	Hinesville.
Lowndes	Geo. C. Marshall	Valdosta.
Lumpkin	E. C. Dillard	Dahlonega.
Madison	W. S. Long	Danielsville.
Marion	Philip Rouse	Buena Vista.
Meriwether	G. E. Rice	Manchester.
Miller	J. O. Pinkston	Colquitt.
Milton	T. L. Parker	Alpharetta.
Mitchell	Geo. C. Schempp	Camilla.
Monroe	H. L. Worsham	Forsyth.
Muscogee and Chattahoochee	C. M. James	Columbus.
McIntosh	J. W. Arnold, Jr.	Darien.
Newton	D. H. Upshaw	Covington.
Oglethorpe	H. G. Wiley	Lexington.
Paulding	W. W. Yates	Dallas.
Pierce	T. B. Wiley	Blackshear.
Pike	G. P. Saye	Barnesville.
Polk	E. D. Alexander	Cedartown.
Randolph	R. C. Rowan	Cuthbert.
Rabun	J. H. Hendricks	Clayton.
Rockdale	J. Morgan Roberts	Conyers.
Richmond	Gus York	McBean.
Pulaski	S. E. McClendon	Hawkinsville.
Putnam	T. L. Asbury	Eatonton.
Screven	W. C. Jones	Sylvania.
Stephens	C. G. Garner	Toccoa.
Stewart	W. S. Childs	Omaha.
Sumter	W. J. Boyette	Americus.
Sumter	Elbert Stallworth (c.)	Americus.
Tattnall	O. T. Harper	Reidsville.
Talbot	J. F. Woodall	Woodland.
Terrell	Jas. A. Allen	Dawson.
Thomas	W. D. Hasty	Thomasville.
Tift	O. D. Watson	Tifton.
Toombs	T. Y. Williford	Lyons.
Towns	W. S. Brown	Hiawassee.
Troup	W. G. Acree	LaGrange.
Twiggs	O. D. Hall	Jeffersonville.
Turner	R. P. Howard	Ashburn.
Upson	J. T. Newton	Thomaston.
Walker	A. C. Veatch	LaFayette.
Walton	Jones Purcell	Monroe.
Ware	E. C. Mann	Waycross.
Warren	C. V. Shirley	Warrenton.
Washington	Sam H. Sherrard	Sandersville.
Wayne	J. P. Shedd	Jesup.
Whitfield	R. L. Dortch	Dalton.
Wilkes	J. Luke Burdette	Washington.
Wilcox	C. B. Davis	Rochelle.

#### County Agents in Home Economics.

Mrs. E. M. Andrews	District Agent	Athens.
Miss Hoyle Skinner	District Agent	Macon.
Mary S. Eppinger (c.)	District Agent	Fort Valley.
Appling	Mrs. Frankie Parker	Baxley.
Barrow	Mrs. J. F. Sheats	Winder.

Bartow	- - - - -	Miss Jessie Burton	- Cartersville.
Bibb	- - - - -	Mrs. Sadie Cheatham	- Macon, Route No. 1.
Brooks	- - - - -	Miss Cobbie Pedrick	- Quitman.
Bulloch	- - - - -	Miss Polly A. Wood	- Statesboro.
Burke	- - - - -	Miss B. W. Freeman	- Waynesboro.
Butts	- - - - -	Mrs. Mary E. Butner	- Jackson.
Carroll	- - - - -	Mrs. V. D. Whatley	- Carrollton.
Chatham	- - - - -	Miss Katie Lanier	- 920 Estill Ave., Savannah.
Clay	- - - - -	Mrs. Eugene Shaw	- Fort Gaines.
Clarke	- - - - -	Miss Eldona Oliver	- Bogart.
Coffee	- - - - -	Miss May Cheatham	- Douglas.
Coweta	- - - - -	Miss K. Simpson	- Newnan.
Crisp	- - - - -	Mrs. R. McK. Johnson	- Cordele.
DeKalb	- - - - -	Miss Alice P. Rivers	- Decatur.
Dodge	- - - - -	Mrs. M. D. Williams	- Eastman.
Dooley	- - - - -	Miss Leta Wood	- Vienna.
Emanuel	- - - - -	Mrs. B. J. Sheppard	- Swainsboro.
Fayette	- - - - -	Miss Lela M. Dickson	- Fayetteville.
Floyd	- - - - -	Miss Lula Stoffregan	- Rome.
Fulton	- - - - -	Miss Floy Shannon,	
		Court House	- - - Atlanta.
Gordon	- - - - -	Miss Woffie Floyd	- Calhoun.
Haralson	- - - - -	Miss Mary J. Stone	- Tallapoosa.
Harris	- - - - -	Mrs. Hettie M. White	- Chipley.
Hart	- - - - -	Miss Lizzie Leard	- Hartwell.
Hall	- - - - -	Miss H. Kimbrough	- Gainesville, Box 189.
Houston	- - - - -	Mrs. Mary B. Wheeler	- Perry.
Irwin	- - - - -	Miss Mary A. Overby	- Ocilla.
Jackson	- - - - -	Mrs. C. A. Mize	- Commerce.
Jasper	- - - - -	Miss Evelyn Bullard	- Monticello.
Jenkins	- - - - -	Mrs. E. T. DeLoache	- Millen.
Laurens	- - - - -	Miss Martha Philbrick	- Dublin.
Lumpkin	- - - - -	Miss D. Ferguson	- Dahlonega.
Macon	- - - - -	Mrs. Kate W. Nelson	- Oglethorpe.
Mitchell	- - - - -	Mrs. Beatrice Schempp	- Camilla.
Muscogee	- - - - -	Mrs. E. G. Bond	- Columbus.
Oconee	- - - - -	Mrs. Nellie Saylor	- Watkinsville.
Pierce	- - - - -	Mrs. Annie W. Wiley	- Blackshear.
Polk	- - - - -	Miss Pauline Bailey	- Cedartown.
Pulaski	- - - - -	Miss Sarah A. Smith	- Hawkinsville.
Rabun	- - - - -	Miss Maude York	- Clayton.
Stewart	- - - - -	Mrs. Tassie O. Clark	- Richland.
Sumter	- - - - -	Miss Rowena Long	- Americus.
Tattnall	- - - - -	Miss Maggie Bethea	- Reidsville.
Thomas	- - - - -	Miss Lilla Forrest	- Boston.
Towns	- - - - -	Miss Eva Hooks	- Hiawassee.
Turner	- - - - -	Miss Anne Rogers	- Ashburn.
Twiggs	- - - - -	Mrs. V. H. Johnson	- Jeffersonville.
Troup	- - - - -	Miss Bessie Lowery	- LaGrange.
Union	- - - - -	Miss Etta Colclough	- Blairsville.
Walton	- - - - -	Miss Eva McGee	- Monroe.
Ware	- - - - -	Mrs. T. B. Atwell	- Waycross.
Washington	- - - - -	Miss Hortense Harris	- Sandersville.
Wayne	- - - - -	Mrs. Annie Bennett	- Jesup.
Wilkes	- - - - -	Miss Mabel Davis	- Washington.



## College of Science and Engineering.

It seems unnecessary to again call your attention to the urgent needs of the College of Science and Engineering. Progress and industry are based on the discoveries of science. The problems of transportation depend upon the skill and ability of our engineers. We are now witnessing the results of a nation devoting its energies to scientific research and the application of the discoveries of their savants to the development of the most horrifying engines of destruction. Through the aid of science this nation hopes to establish autocracy throughout the world which will enable her to effectively dominate all civilized nations and destroy liberty and the ideals of democracy as we understand and interpret them. Many Americans have unfortunately concluded that to emphasize industrial and applied education will eventually make our point of view as distorted as that of the Germans. Permit me to say, however, that the liberty of the world now depends on the skill and ability of our men of science and engineering to circumvent and overcome the engines of destruction created by the so-called superman in the interest of "kultur." Those who have studied the war fully understand that such changes and advantages as have come to the Allies of the western front are due to the superiority of the English and French artillery and the control of the air. The menace of the submarine which threatens the downfall of the cause of the Allies which we have now espoused can only be successfully met by the scientist and the engineer. The solution of the problems which have threatened the continuance of many of our American industries since the inception of the war has been brought about by the work of the scientist and engineer. Hence, the interests of humanity and civilization and the maintenance of the ideals for which our forefathers shed their blood demand that we endow in the most liberal manner all institutions capable of training and developing the latent powers of our young men along scientific and engineering lines. The small appropriation of \$10,000 which you have been asked to secure for several years past for the College of Science and Engineering is a mere bagatelle when compared with the important and fundamental service which this division of the University is capable of rendering the people of Georgia through training an acceptable portion of the state's young men to become specialists along the lines indicated. If Georgia is to do her full duty in this war and in the service of the nation and for the cause of liberty, she should give not \$10,000.00 but \$100,000.00 to the College of Science and Engineering. I hope you will call this matter to the attention of the legislature in such an emphatic manner that the long-sought-for endowment of this work will no longer be delayed upon the theory that the state is financially unable to meet its obligations in the direction indicated.

## Library.

For several years past the work of the editor and librarian has

been associated, but it has been increasingly apparent that a separation of these duties would soon be necessary. Upon the resignation of Mr. C. A. Whittle on February first, and with the consent and advice of the Executive Committee it was determined to make this change. Since that time, Miss Nelle M. Reese has been in charge of the library and has reorganized it to the material advantage of the users of books. The total number of volumes recorded in the accession book is 3186. Of this number 306 were added during the year. Substantial additions have been made to the bulletin list, publications of not only the U. S. Department of Agriculture but the state Experiment Stations having been secured, properly indexed and bound. Over 1500 guide cards have been placed in the card catalogue cabinet. A rearrangement of the location of the books and bulletins in the library has been made which renders them much more accessible than hitherto. A new system of loaning and circulation has been put into effect. Bibliographical material on the following subjects has been prepared and filed for future reference: Agricultural education, alfalfa, barley, beef production, canning, corn and corn products, cotton seed and products, cowpeas, feeding stuffs of the south, grasses, millet, oats, peanut and products, pork production, rape, rye, soy beans, sorghums, turkeys, velvet beans, vetch, wheat; and debates on the following subjects: Resolved, that for economy in production and marketing of farm products, the size of the average Georgia farm should be increased. Resolved, that the boll weevil will eventually prove beneficial to the south.

The use of the library by the faculty and students continues to increase. During the month of March, for instance, 1433 persons used the reading room, 159 the library for reference work, while nearly 300 bulletins, books and magazines were taken out for home use. The library receives 160 newspapers of the state in exchange for the free plateservice which the College sends out. The reading room also receives 150 other publications, mainly agricultural. The use of the library has now reached such proportions that it is necessary to provide additional room for it, and it is recommended that the room adjoining the library be made available for use as a herd book room, thereby providing a most essential seminar for the division of animal husbandry, and making available the 425 herd record books now in the library.

### **Publications.**

Unusually good work has been done during the year in the preparation and distribution of bulletins of primary importance to our agricultural industries. Fifty-one bulletins and circulars have been printed in editions aggregating 429,500 copies and containing 852 pages. Fifty thousand copies of eight large posters have been distributed. Approximately 1,556,000 copies of bulletins and circulars have been issued in the past ten years containing 30,276,000 pages. The titles of the publications issued during the year are as follows:



Title	Edition	Pages Per copy	Total pages
Pictorial Catalogue - - - - - Georgia State College of Agri- culture.	2,000	20	40,000
Analyses of Soils of Jones County	2,000	47	94,000
President's Annual Report 1915-16	1,000	56	56,000
Seventh Annual Report of the Eleven District Agricultural Schools of Georgia - - - - -	1,500	35	52,500
Annual Report of Extension Service, 1915-16 - - - - -	1,500	56	84,000
Seed Corn Selection - - - - -	15,000	12	180,000
Announcement of Short Courses, January 3-14, 1917 - - - - -	7,500	24	180,000
Oat Production in Georgia - - - -	10,000	12	120,000
Analyses of Soils of Habersham County - - - - -	2,000	40	80,000
Cotton Production Under Boll Weevil Conditions - - - - -	35,000	32	1,120,000
Minimizing Boll Weevil Damage Through Proper Cultivation and Fertilization - - - - -	50,000	12	600,000
Reorganization of Farms in Boll Weevil Territory - - - - -	10,000	16	160,000
Boys' Clubs, 1916 - - - - -	10,000	20	200,000
Catalogue, 1917-1918 - - - - -	3,000	110	330,000
Vegetable Gardening in Georgia, A Revised Edition of Bulletin No. 88 - - - - -	5,000	48	240,000
Cotton Varieties in Georgia, Varia- tion of the Oil Content of Cot- ton Seed and Resistance to Disease - - - - -	10,000	36	360,000
Girls' Work in Georgia, 1917 - - -	5,000	16	80,000
When and What to Plant to Meet Present Conditions - - - - -	15,000	13	195,000
Solving the Food Problem - - - -	5,000	13	65,000
On Preparedness for the Boll Weevil - - - - -	5,000	3	15,000
A Brief Survey of the Livestock Situation - - - - -	2,500	3	7,500
Controlling the Pecan Case-Bearer	5,000	4	20,000
Beautifying the Rural Home - - -	5,000	7	35,000
Improving the Woodlot - - - - -	5,000	8	40,000
Farm Machinery Dealers' Short Course, Jan. 3-14, 1917 - - -	5,000	4	20,000
Slaughtering and Curing Pork on the Farm - - - - -	5,000	8	40,000
Growing Tree Seedlings - - - - -	5,000	8	40,000
Commercial Cantaloupe Growing in Georgia - - - - -	10,000	8	80,000
Peanuts a Substitue for Cotton -	10,000	8	80,000
Suggestions on Marketing Live Stock - - - - -	10,000	8	80,000
Announcement of Short Courses for Farm Women Jan. 3-14, 1917 - - - - -	2,500	4	10,000
A Call for Agricultural Leaders -	15,000	7	105,000

Lumberman's Short Course - - -	5,000	4	20,000
Cotton Variety Tests, 1916 - - -	5,000	4	20,000
Septic Tank - - - - -	10,000	7	70,000
Purchasing Ground Phosphate Rock	10,000	4	40,000
Preparing for a large Corn Crop -	10,000	4	40,000
Boys' Pig Clubs - - - - -	10,000	8	80,000
Feeds for Dairy Cows - - - - -	10,000	8	80,000
Soy Beans and Cowpeas - - - - -	10,000	8	80,000
Condition Powders and Condimental Stock Feeds - - - - -	10,000	4	40,000
Velvet Beans - - - - -	10,000	4	40,000
Farm Building Plans Available - -	10,000	4	40,000
Vegetable Planting Table - - - -	10,000	4	40,000
Georgia Calf Clubs - - - - -	5,000	12	60,000
Summer Courses at Georgia State College of Agriculture, 1917,			
July 2nd to August 4th - - -	2,500	8	20,000
Making the Corn Crop - - - - -	10,000	4	40,000
Speech of J. M. Taylor - - - - -	2,500	8	20,000
Announcement 1917-18, Georgia State Forest School - - - - -	2,000	8	16,000
Crops to Grow with Corn - - - -	20,000	4	80,000
Analyses of Soils of Dougherty County - - - - -	2,000	47	94,000
<b>Total - - - - -</b>	<b>429,500</b>	<b>852</b>	<b>5,729,000</b>

#### Posters.

Title	No.	No. Issued
Grow Cotton in Spite of the Boll Weevil - - - -	7	10,000
Give the Hog a Chance - - - - -	8	10,000
Spray for Perfect Fruit - - - - -	9	5,000
Purebred Stock—Boys' and Girls' Clubs - - - -	10	5,000
Plant a Garden - - - - -	11	5,000
Be Warned, Warning as to the Food Situation - -	12	5,000
Garden Planting Table - - - - -	13	5,000
Build a Potato Curing House - - - - -	14	5,000
<b>Total - - - - -</b>		<b>50,000</b>
115,000 Dodgers were sent out advertising Boll Weevil meetings.		

#### Editorial Department.

We unfortunately lost our editor the first of February, and the work of this department has been carried forward somewhat disjointedly since that time. On Mr. Whittle's withdrawal we secured the services of Mr. J. M. Purdom, Jr., a graduate of the College who took up his editorial duties with enthusiasm and success, but was induced to leave us at the end of three months by reason of the larger remuneration offered him by the Bureau of Farm Management of the U. S. Department of Agriculture. On the advice and approval of the Executive Committee, Mr. H. T. Maddux, of the class of 1916, was appointed editor and took up his duties on June 1st. You will see from the list of publications and plate matter prepared and distributed during the year that the entire time of one capable official is needed to supervise the editorial work satisfactorily. The preparation of bulletins and press matter dealing with agricultural

subjects is a field in which few have specialized as yet. It is self-evident that one having charge of work of this character should have the necessary technical training, and believing in the capability of the men we are graduating from the College, it has seemed advisable to place one of our own graduates in charge of this work. If the legislature offsets the increase available to Georgia under the Smith-Lever Act for the federal fiscal years 1917-1918 and 1918-1919, there will be a considerable addition to the funds available for printing during the period mentioned. This should enable us to expand the work of the editorial department with advantage.

A review of the situation will show that we have made great progress, not only in the matter of the number of bulletins printed, but in the variety of topics discussed. At the same time, I beg to call your attention to the deplorable fact that we are quite unable to print editions of bulletins which enable us to send these publications to the people on our mailing list and those who are calling for them through the medium of personal letters addressed to this office. To meet the present demand we need at least three times the printing fund available. We have facilities available for distributing bulletins in editions of 50,000 to 60,000, whereas, you will observe we are printing from 3,000 to 25,000. I may say that the cost of printing has greatly increased during the past year on account of the extraordinary price which paper now commands.

Plate matter has been prepared and distributed as usual to the weekly press of the state. It is used by about 150 papers, and through this medium we reach several million readers each year. This is one of the best ways in which we are able to serve the interests of the people, for the press service is kept strictly up-to-date and the subject matter sent out is seasonable and designed to aid in the solution of the problems which the farmer has to meet during any given month.

Eight large posters were printed during the year in editions of from 5,000 to 10,000. These have been distributed mainly through the county agents and are put up in schools, post offices, country stores, and railroad stations. This method of distributing concise and definite information such as can best be handled on posters has proven very popular and effective. In many schools the subject matter these posters contain is used as the basis of the agricultural instruction given the boys and girls. In view of the food crisis a considerable number of special posters, bulletins and newspaper material for the use not only of the daily but the weekly press has been prepared and sent out. It has been used very effectively.

#### **Boys' and Girls' Short Courses.**

The annual short course for the winners of the boys' and girls' scholarships was held August 8 to 18. The course was well attended and the boys and girls did excellent work. It has been determined to hold the course on July 10 to 20 this year, and as the

Summer School will then be in progress arrangements have been made to house the girls at Lucy Cobb Institute and place the boys in tents under military supervision. It is believed that this arrangement will prove eminently satisfactory as the girls will be provided with desirable quarters and the boys given a taste of camp and military life which they will no doubt enjoy. The course will be projected along lines previously followed with such success. It is anticipated that at least 300 will be in attendance. Last year a number of mature people desired to attend the course which they found very attractive and helpful. On this account permission will be granted to all adults to avail themselves of the opportunity it affords this year. In this connection it is proper to state that the work is carefully and systematically organized and the young people have evidenced such enthusiasm in it that all older persons who have come in contact with them have been impressed with the value of these courses. It is a great privilege for the institution to be permitted to entertain and instruct such a representative body of boys and girls since they come from all parts of the state and have shown exceptional ability in the following subjects: corn, calf, pork and poultry production, crop rotations, and the growth and canning of garden crops. In traveling about the state I have been impressed with the interest and gratification with which leading citizens have detailed the success which has attended many of the boys and girls attending these courses. Best of all is the assurance so frequently given that as a result of what they have seen and heard at the College they have determined to go forward and prepare themselves in earnest for life's struggle by taking advanced work in either this or other institutions which the state has provided. It therefore seems to me that some of the most effective and valuable work which the College is doing is along the lines of inspiring the young people of the state to prepare themselves efficiently for the leadership work which is so soon to devolve upon them. Scholarships to the value of \$25.00 were offered by the following: Georgia Railroad, 19; Southeastern Fair, 17; Georgia State Fair, 15; Georgia-Florida Fair, 4; Atlanta, Birmingham and Atlantic Railroad, 12; Georgia, Southern and Florida Railroad, 11; County Fair Association, 17; Women's Clubs, 10; Georgia Bankers' Association, 15; miscellaneous, 129. Our thanks and appreciation are due these people for the very liberal manner in which they have supported the work of the various club organizations which have been established and fostered so successfully by the College.

#### **Winter Meetings of Farmers.**

The regular winter meetings of the Georgia Dairy and Live Stock Association, the State Horticultural Society and the Georgia Breeders' Association were held at the College in January. The usual courtesies were extended to these organizations, and we are indebted to the following gentlemen for delivering addresses without



remuneration save for their traveling expenses: Dr. Tait Butler, Editor Progressive Farmer, Memphis, Tenn.; Hon. H. C. Thompson, U. S. Department of Agriculture; Wallace McMannies, American Jersey Cattle Club; C. W. Warburton, U. S. Department of Agriculture; W. M. McFadden, Poland Record Association; R. J. Evans, American Duroc-Jersey Association; E. A. Bishop, American Guernsey Cattle Club; and Ellis McFarland, Percheron Society of America.

As in the past, Prof. Jarnigan has acted as secretary of the Georgia Dairy and Live Stock Association; Prof. McHatton of the State Horticultural Society; and Prof. Rast of the Georgia Breeders' Association. While all the meetings were well attended and effective work was done a good deal of interest was evidenced by the Georgia Dairy and Live Stock Association in the proposition of constructing a special building for the animal husbandry division on the College campus as soon as practicable. The several associations joined in recommending that an appropriation of \$60,000.00 be sought for this purpose and to that end the subjoined resolution was adopted:

"Whereas, The advent of the boll weevil in Georgia has necessitated reduction in cotton acreage, forcing a more general diversification; and,

"Whereas, Livestock has, therefore, become a more potential part of Georgia's agriculture; and,

"Whereas, Livestock is the basis of all permanent soil fertility and agricultural prosperity; and,

"Whereas, The physical equipment for teaching animal husbandry at the Georgia State College of Agriculture is inadequate; and,

"Whereas, The extension work in animal husbandry is directed through the Georgia State College of Agriculture, and more housing facilities are needed for offices and demonstration pavillions; and,

"Whereas, No money has been spent for providing such equipment,

"Be it Resolved, That the Georgia Dairy and Livestock Association, The Georgia Breeders' Association and the Georgia State Horticultural Association in session at Athens, Ga., January 15 to 17, endorse the movement now on foot to establish a degree course in veterinary medicine and provide a live stock building on the campus of the Georgia State College of Agriculture commensurate with the dignity and importance of the live stock interests of the state and that each pledges its support to this movement and promises to personally take the matter up with the State Senator and the Representative and get their support of the movement before the next Legislature convenes."

The following committee was appointed to take the matter up with the proper representatives of the Georgia General Assembly: I. C. Wade, Cornelia; B. W. Hunt, Eatonton; T. J. Simpson, Rome; S. C. Andrews, Cuthbert; W. R. Bowen, Fitzgerald; W. J. Mullis, Waycross; E. T. Comer, Mill Haven; M. B. Lane, Savannah; Judge James Hick, Dublin; R. C. Neely, Waynesboro; J. C. McAuliffe, Augusta; C. H. Bonner, Milledgeville; E. A. Barnett, Washington;

J. J. Conner, Cartersville; W. T. Anderson, Macon; H. H. Tift, Jr., Tifton; J. B. Wight, Cairo; C. L. Bennett, Jefferson; J. R. Brown, Ashburn; Capt. W. B. Rice, Dublin; J. H. Hooks, Warthen; W. I. Harley, Sparta; M. P. Jarnigan, Athens; Evans Lunsford, Covington; Gunby Jordan, Columbus; J. Pope Brown, Hawkinsville; Ed Conwell, Lavonia; Jack Craft, Hartwell; P. S. Cummings, Lela; C. F. Shingler, Ashburn; E. J. Willingham, Macon; Henry Watkins, Atlanta; R. E. Ellington, Fayetteville; J. T. Anderson, Marietta; W. H. Peacock, Cochran; J. D. Weaver, Dawson; H. A. Petty, Dawson; R. F. Shedden, Atlanta; L. W. Jarman, Porterdale.

A barbecue was provided for the guests of the several associations through the courtesy of the Athens Chamber of Commerce. It was served under the direction of Mr. D. P. Haselton, assisted by the lady members of the College faculty. Some 500 people were in attendance at the various conferences.

### District Agricultural Schools.

The annual meeting of the principals of the district agricultural schools was held in the executive office on April 27, 1917. Eight of the principals were present. In view of the war emergency it was agreed that no changes in text books or in the course of study be made for the ensuing year. In view of the passage of the new text book law, it was considered advisable to take time to study and digest the situation very thoroughly before making any new adoptions. In order that this work might be done to the best advantage, a committee of three of the principals and two representatives of the State College of Agriculture was appointed to bring in a report on the subject of text books and the unifying of the course of study at the next annual meeting. The conference established the fact that the district agricultural schools ranked as four-year high schools and gave the required number of units for entrance to the College of Agriculture. The question of laboratory work was taken up and the lack of uniformity attending the same discussed at some length. It was the consequent belief that improvements will be effected in this direction. It was further advised that all teachers be college graduates and that an effort be made to obtain specially trained men to handle the subjects they are expected to teach. It was agreed that the minimum board for the year in view of the increased cost of food supplies be fixed at \$11.00 and that board and laundry be fixed at \$12.00. In order that a uniform policy with reference to the question of fees and refunds might be determined upon the subject was referred to the committee on text books above mentioned with the request that they report at the next meeting. Professor Stewart was requested to take up the question of the entrance of the girl graduates of the schools into the normal schools, as there seems to be some confusion on this point at the present time.

A statement was presented to the conference by Prof. Campbell



with reference to the Smith-Hughes vocational bill and the interest which the schools might have in this measure. In order that this subject might be properly considered a committee of five was appointed to take this matter under advisement in association with the principals of the schools and the presidents and secretaries of the local boards of trustees. As some of the schools are paying the expenses of contestants to the district agricultural school meet held annually at the College on the last Friday and Saturday in April, it was advised that this matter be brought to the attention of the various boards of trustees with the request that they permit these expenses to be paid by all the schools. It seems advisable that each school be authorized to employ a secretary and book-keeper in order that the uniform system of accounting introduced last year at the request of Mr. J. W. Stephens, state school auditor, be carried out in proper detail in so far as it affects the work of each school.

The second annual literary and athletic meet of the schools was held at the College on April 27 and 28. Eight schools were represented. Some 66 boys and 33 girls participated in the contests. Excellent work was done by all the contestants, a number of athletic records being broken, while the girls made a most creditable showing. The subject for debate was: "Resolved, That for economy of production and efficiency in marketing farm products, the size of the average Georgia farm should be increased." It was handled in a very happy manner and indicated that the debaters had given keen and intelligent consideration and study to the subject. Medals similar to the type used last year were awarded to the winners in the various events through the courtesy of the Virginia-Carolina Chemical Company. The contest was more successful from every point of view than the one held last year. The principals were high in their praise of it, and unanimously passed a resolution asking the Board to authorize its continuance in the future. A luncheon was provided for the visitors on the last day of the meet. A very considerable part of the food used was prepared by the girls who took part in the cooking contest.

#### Meetings Organized by College.

The meetings held in the state during the past year total 4858. These meetings were organized primarily through the activities of either the extension or some other division of the College. The nature and character of the service work performed in this direction is shown in the following table:

Kinds of Meeting	No.	Counties	Attendance	Miles Traveled
Farmers' Institutes - - - - -	96	96	17,829	16,533
Extension Schools - - - - -	6	6	4,350	1,820
Motion Picture Exhibitions -	83	47	22,000	4,163
Poultry Club Meetings - - -	64	28	5,029	4,671
Pig Club Meetings - - - - -	67	18	4,978	11,046
Corn Club and Demonstration Meetings - - - - -	1120	130	104,375	241,714

Canning Club and Demonstration Meetings - - - -	2487	46	34,705	75,858
Livestock Meetings - - - -	480	150	54,517	65,834
Food Preparedness Meetings -	108	16	37,200	890
Teachers' Institutes - - - -	6	4	806	996
Educational Exhibits - - - -	5	5	102,000	4,500
Boll Weevil Meetings - - -	315	37	34,794	*
Miscellaneous Meetings - - -	21	21	1,172	1,023
Total - - - - -	4858		423,755	429,048

Every man associated with the College participated in some of these meetings, though the major part of the work has naturally been performed by members of the extension force. The record of attendance and the mileage traveled indicate the response which the people have made to this feature of our extension activities. It illustrates their desire for information and their belief that the College is in position to serve their interests acceptably. A summary of the attendance upon the train movements and other field service work performed by the College during the past ten years has been brought up to date and is presented for your information.

#### Extension Attendance Summary—Educational Trains.

Year	Number Meetings	Attendance	Miles Traveled
1908 - - - - -	150	150,000	5,000
1911 - - - - -	158	350,000	5,500
	Extension Schools	Field Meetings, Etc.	
1908 - - - - -	42	10,000	15,400
1909 - - - - -	144	17,330	35,500
1910 - - - - -	200	42,200	85,000
1911 - - - - -	209	47,261	95,700
1912 - - - - -	479	98,470	109,730
1913 - - - - -	1096	120,156	139,660
1914 - - - - -	949	218,063	188,300
1915 - - - - -	1752	228,608	188,666
1916 - - - - -	3687	432,649	383,475
1917 - - - - -	4558	423,755	429,048
Total - - - - -	13424	2,138,494	1,681,885

You will observe that a total of 13,424 meetings have been held with an attendance of 2,138,494. The representatives of the College traveled 1,681,885 miles to carry information and advice on agriculture and related subjects into every part of Georgia. I believe every county has been reached and many of them repeatedly. The record of the institution in this direction is quite unique and has not been surpassed even in the wealthy and populous states of the middle west.

#### Agricultural Clubs.

The work of the agricultural clubs commenced in 1906 has been continued along the lines laid down. Of course, modifications as

\*Record not kept as automobiles and other conveyances were used.

to organization, methods of presenting important data and the matter of handling club records have been made as our knowledge and experience in the work has increased. The club records are now all printed and distributed from the College. In many instances they have been greatly simplified and so made practical for the boy or girl to keep.

The work of the year is featured by the establishment of calf clubs. The eradication of the cattle tick from some fifty-six counties has led to this step in order that an interest in beef animals might be created and the best methods of handling and managing them might be as widely disseminated as possible. The organization of this class of clubs is bound to result in much good. The very considerable enrollment already secured shows their popularity, and indicates that the farmers of the tick-free area are becoming thoroughly alive to the importance and necessity, not only of improving the grade of our beef cattle, but increasing their numbers very materially. Since we are falling far short of providing ourselves with the meat consumed within the borders of the state, the importance of organizing calf clubs becomes apparent.

No doubt you recall that Georgia was the first state to establish boys' corn clubs, and that out of this initial movement has grown the inauguration of the great variety of clubs now maintained, not only in this but in other southern states. The growth of the club work during the past ten years has been remarkable and constitutes a splendid tribute to the organizing ability of our field forces. I am glad to say that interest in this work continues unabated as the enrollment for 1917 demonstrates. According to the latest figures there are now 6057 members of the corn clubs, 3131 members of the pig clubs, 5213 members of the canning clubs, 1050 members of the poultry clubs, 1129 members of the calf clubs, 284 members of the four-crop clubs, 6000 members of farm women's clubs, and 324 members of miscellaneous clubs, making a total of 23,188 persons enrolled in this forward to the land and home movement.

The relation of the clubs to the schools has been maintained in so far as practicable. We have had splendid coöperation and support from many superintendents and teachers. In those counties where we have no agents it has been rather difficult to handle the work satisfactorily, as you can readily appreciate, and it is self-evident that it will never be possible for us to coördinate and unify the work in all the counties with the highest measure of success until we are able to maintain a man and woman agent in each county. One of the primary difficulties with the club work has been due to the trouble the teachers have experienced in knowing just what to present to the attention of the boys and girls to aid them in the furtherance of their work. It is not surprising that this should be the case as comparatively few teachers have had an opportunity to avail themselves of any special instruction along

agricultural, vocational or industrial lines. This condition should be remedied, and very great progress could be made in the right direction in a comparatively short time if the state would appropriate enough money to enable us to put on specialized teachers' training courses of from one to three months' duration. These courses could be conducted during the summer months and might properly form a part of the schedule of the University Summer School. In order that this movement may bear fruit most rapidly, it seems desirable that the State Board of Education should emphasize the necessity of training in the direction indicated, and that county boards of education and school trustees should insist on the teachers preparing themselves through the agency of such courses. When this is done the work of the school and the home can be related more effectively, the fundamentals of agriculture and domestic science placed before the boys and girls in an attractive manner, the general relation of the school work to that of the environment by which it is surrounded materially improved, and a new interest in agriculture and home arts created in the minds of our boys and girls. It is useless to expect to keep them in the country until we show them the response which the soil is capable of making under a judicious system of farm management. Why not admit that we have been pursuing a system of destructive soil mining rather than a constructive type of agriculture? This must be done before we can convince our boys and girls of the opportunity which the open country affords. Then when they have received the necessary technical training they will be willing to stay in the open country and make it what God Almighty intended. No doubt it will be difficult to accomplish this but the proposition is fundamental to the economic and progressive welfare of Georgia, and as history has amply demonstrated, we can not hope to become uniformly prosperous until we place our chief industry on a sound, economic vocational basis.

In my last report I called attention to the desirability and necessity for preparing and distributing a pamphlet outlining a course in elementary agriculture, domestic science and subjects related thereto for the use of teachers in urban and rural schools. No progress has been made in the consummation of this idea. In view of the difficulty and delay which will necessarily follow the inauguration of the plan for teacher training previously suggested, the preparation and distribution of such a pamphlet should be undertaken at once as it will serve a most important and essential purpose. It need not cost over \$2,500.00. The state should not hesitate to make so small an appropriation for such an important purpose.

A few illustrations of the manner in which the club work is aiding in developing the capabilities of our boys and girls are presented for your information. Girls' canning clubs were not organized until 1911 when active work was begun in two counties. This year 56 counties have been organized with an agent in charge, a part of



the salary of each being paid by the county in which she is located. Coöperation has also been established with several of the district agricultural schools and the State Normal School at Athens. In 1916 there were 4191 girls in the canning clubs in Georgia. They submitted 1998 reports showing that they put up from their tenth acre gardens 1,400,854 pounds of tomatoes and other vegetables. They used for this purpose 266,213 tin cans, glass jars and other containers. These canned goods were valued at \$30,612.55. These girls also filled 200,000 containers with fruits and vegetables from the orchard and farm. The value of all the products put up by the girls totalled \$50,612.55. It is self-evident that these girls are increasing their earning capacity and thus adding to the wealth of the state. I leave it to you to determine what it means for this enlightening, multiplying and inspiring power to come into the hearts and lives of country girls who have been so long neglected and overlooked. The fruition which this effort is to bear in the immediate future may be imagined by the dreamer but can scarcely be portrayed by language. As a result of the canning club effort, it is now possible to buy the 4-H brand of goods in many of our towns and cities. The 4-H brand is the accepted standard for the canning club girls. It means that an effort is being made to train the individual in the efficient use of the head, the heart, the hands and the preservation of health. Our object is to train the head to think, to plan and to reason; to train the hands to be useful, helpful, skillful; to train the heart to be kind, true and sympathetic; and to train for health so that the individual may resist disease, enjoy life and be efficient. And now it seems desirable to add a fifth H. to the brand which stands for happiness, comfort and contentment.

Corn clubs were organized in 133 counties. The enrollment was 7250. Hubert McCart, of Cochran, Bleckley county, made the best record for the state with a yield of 118 bushels per acre. The boys submitted 1628 complete reports which show that they made an average of 42 bushels of corn per acre at an average cost of 42.2 cents per bushel. The duplication of these results all over the state would have increased the corn crop over two and one-half times and added greatly to the profit of our farms.

The three and four crop clubs have continued to do good work. These clubs were organized in 1914. In the three-crop schedule the object is to induce the boy to enlarge his farm from one to two acres. The second acre is sown to fall oats to be followed with peas for hay the next spring. The champion three-crop club member in 1916 was Pierce Head, of Barnesville, Pike county, who grew 67 bushels of corn, 47 bushels of wheat and 5410 pounds of hay on his two acres of land. The four-crop clubs were organized on a three-year basis. One acre is sown to corn with a legume turned under, another acre to fall oats followed with peas for hay, and the third acre is devoted to the cultivation of cotton, in which crimson clover is sown in the fall. By this plan the boy is induced to establish a well-

ordered three-year rotation in which soil building is featured. Chester Crowder, of Kensington, Walker county, made the best record in 1916. He grew 104 bushels of corn, 2192 pounds of seed cotton, 60 bushels of oats and 8624 pounds of hay on three acres of land.

In this connection it is proper to say that it is not the aim or the object of either the corn or three and four-crop clubs to induce boys to produce enormous yields, but rather to teach them the fundamental principles involved in the proper preparation, fertilization and cultivation of the land. The importance of seed selection and of crop rotations and soil building are all emphasized. Thus, many of these boys possess more definite and concrete information concerning how to organize and develop a constructive type of agriculture than their fathers possess after thirty to fifty years of so-called practical experience as farmers.

It is difficult to imagine what effect this type of training is to exert on the future of our agriculture, but it is certain that the young men who avail themselves of the advantages which the clubs offer will enter upon their life work well prepared to meet the shock of the changed conditions which our agriculture must undergo for economic if for no other reasons. It is needless to say that if the principles of conservation which they appreciate are put into practice and anything like the yields they have obtained produced on the average acre of land devoted to cultivation in Georgia that question of the state feeding itself and producing the necessary surplus for other sections will be easily solved and Georgia and her people made happy, successful and prosperous through the conservation of \$100,000,000.00 of agricultural wealth we are now wasting annually. To some it may appear that this type of education is based solely on material considerations, but in this they are very much mistaken. I am not one of those who can believe or subscribe to the doctrine that the man who makes a bare existence from the soil is as happy and contented and as valuable a citizen as the man who makes a success out of his farm and feels that he is indeed a dominating factor in the affairs of the community in which he lives. The unsuccessful farmer can not provide those facilities and opportunities to which his family is entitled and this of itself breeds discontent and forces the boys and girls to leave the farm. The idea, therefore, that the proper equipping of future generations for life's struggle and making them more efficient producers and handlers of wealth is to nullify their value as citizens is erroneous. The descendants of the hardy Anglo-Saxon stock of pioneers are not likely to be so easily spoiled.

### **Home-Building Activities.**

Six thousand farm women have been enrolled for definite work under the direction of the county home economics agents in Georgia for the year 1917. This work is in progress in 57 counties.

These women are carrying on demonstrations under the guidance of the agents along some of the following lines: Gardening, poultry raising, butter making, bread making, and the construction and operation of labor-saving devices and home conveniences. This work is organized on the community club basis. Groups of women meet regularly for the purpose of studying their individual and local problems. A new interest has been created in general gardening in the 6000 homes in question. They are alive to the importance of canning and drying fruits and vegetables for winter use. They are studying the use which wheat flour substitutes, such as soy beans, peanuts, sweet and Irish potatoes constitute. They are concentrating their attention on poultry work with the result that larger and better flocks and an increased egg production has been obtained on many farms. They have been taught how to preserve eggs in water glass, while demonstrations have been made in the grading and packing of eggs for cooperative marketing. It is believed that in the course of time a material increase in poultry raising will be brought about through the efforts of these farm women community club organizations. As you probably know, country butter brings about twenty cents a pound, and is without uniformity as to color, flavor and package. Many women have been taught to make butter rivalling that turned out by the best creameries and which brings them forty cents a pound, thus doubling the income from this source alone.

Owing to the high price of wheat flour much attention has been centered on bread demonstrations, and the making of biscuits and muffins out of wheat flour substitutes. Very gratifying progress has been made in this direction. Labor-saving devices, such as fireless cookers, iceless refrigerators, wheel trays, fly traps, ironing boards, butter making equipment and devices for drying fruits and vegetables have been installed in many homes. The inspiration which these accomplishments have brought into the hearts of thousands of women may be imagined by those who are familiar with conditions in the average rural home. One of the drawbacks to rural life lies in the isolation of the people and the lack of social intercourse. The organization of the community club or local unit referred to has therefore been undertaken. These clubs meet as a rule on Friday afternoons, the homes of the members being visited in rotation. The problems of the open country are discussed at such meetings, committees being appointed to discuss topics related to education, recreation, beautification and sanitation. As a result of the efforts of these good women, instructive entertainments have been provided in the different communities during the past winter, and many rural schools have been standardized and work in domestic science established therein. At one of the schools recently visited a quilting party was in progress, and a sale of fancy work was in prospect, the money to be used for the improvement of the school building.



Those who are familiar with the neglected appearance of many of the rural schools will realize what a wonderful transformation it will mean to have the good women of the community center their interest and activity on its development.

A special effort has been made to aid the food campaign through the agency of the women demonstrators and coöperators in all the counties where agents are maintained. Dietary studies have been introduced and the conservation of food and the elimination of waste emphasized. In response to the urgent appeal of the farm women of Georgia, a short course, similar to that provided for the men was organized in January. Sixteen women attended and it is believed that a much larger number will come another year. Some idea of the interest and thirst for knowledge evidenced by these women may be conveyed to you when I state that more than 50,000 bulletins and circulars have been distributed to them during the year.

A summary of the work accomplished along home economic lines during 1916-1917 follows:

Number women enrolled-----	6,000
Number clubs -----	300
Total number of canned products-----	124,077
Total value of canned products-----	\$23,196.60
Number demonstrations in cooking-----	11,394
Number fireless cookers made -----	1,026
Number iceless refrigerators made -----	406
Number fly traps made -----	1,158
Number kitchen cabinets made -----	46
Number wheels trays -----	152
Number ironing boards -----	119
Number water systems installed -----	38
Number houses screened -----	519
Number butter paddles -----	300
Number butter molds -----	204
Number thermometers -----	39
Number barrel churns -----	24
Number shotgun cans -----	115
Number pounds of butter made -----	11,754
Number butters workers -----	25
Number rest rooms installed -----	16
Number meetings and conferences -----	1,500
Number people in attendance -----	35,000
Total value of poultry products-----	\$ 7,250.00
Number other devices made (floor mops, towel racks, and mouse traps) -----	1,750

#### Work Of The County Agents.

The county agricultural agents have done excellent work during the past year. There are 110 men agents employed at the present time, their work being supervised and directed by six district agents and fifteen specialists with headquarters at Athens. This work, as you know, is maintained out of Smith-Lever funds derived from state and federal appropriations, the offsets made by the counties and through indirect congressional appropriations received to



the extent of \$64,880.00 through the Office of States Relations Service for the South. The close coördination of the effort of all state and federal agencies working along educational and demonstrational lines for the development of the agriculture of the state which was detailed in my last report has been continued, and the gratifying record appended to this report demonstrates the wisdom, success and desirability of this arrangement. You will see that quite an addition to the force of agents has been made and that work is now in progress in 103 counties. Nearly two-thirds of these men have received instruction at the College, over half of them being graduates of the College. The class and character of service the agents are capable of rendering the people of Georgia is being steadily improved.

The varied and exacting duties which an agent is called on to perform are not always appreciated as they should be. In one county, for instance, there are 1600 farmers. If the agent is to call on all these people and aid them successfully within a period of 313 working days, he would have to visit five to six farms each day and then could only reach them once. This would effectually prevent him from doing any service work of importance to the community and would virtually force him to close up his office. The agent is expected to act as a clearing house for information of every conceivable kind. It is proper that he should do this but it is hardly reasonable to expect him to be in several places at once. As a matter of fact, the activities of a county agent are usually divided into two classes. First, he is expected to carry on a certain number of specific or definite demonstrations illustrating, for instance, the best methods of planting, cultivating and handling cotton under boll weevil infestation. These demonstrations of course may deal with the introduction of new crops or live stock. Second, he is supposed to give general information. This may be done through the school, farmers' meetings, the organization of community clubs, by letter or telephone, and through the distribution of bulletins. If his efforts are properly coördinated, therefore, he can reach and aid a large per cent of farmers in the county in one of the numerous ways indicated.

The agent is naturally supposed to work as far as he can with adult farmers but should not overlook the importance of the business man, who must be induced to take an interest in the work of the farmer, particularly with reference to the necessity of providing suitable markets for diversified crops. The agent also has to supervise the work of the boys' and girls' clubs and other educational organizations designed to foster either agricultural or home economics work in the county. Where specific demonstrations are organized the agent must of necessity visit the farmer from time to time and see that his instructions are carried out. Naturally, he is not supposed to have more than 50 to 100 demonstrations because the work carried out on a farm in a given com-

munity is intended to represent a school of information and advice for the farmers of that particular section of the county.

During the past year an effort has been made to establish community clubs for farmers and farmers' wives, and more than 2500 of these have been organized since the first of January. In many instances the business men in the county belong to these clubs, so at the meetings which are held from time to time general information of benefit to all classes of citizens is disseminated. The nature, extent and far-reaching influence of the work of the men county agents is nicely illustrated by the summary presented in the following table which I respectfully request you to study in detail.

### SUMMARY OF COUNTY AGENTS' WORK, 1916

<b>(Corn)</b>	
Number demonstrators and coöperators-----	6,909
Acreage corn demonstrations -----	37,436
Average yield per acre from demonstration areas-----	30.5
Average yield per acre for state in bushels-----	16
Number acres in demonstrations for silage-----	3,421
Yield per acre in tons-----	6
<b>(Cotton)</b>	
Number demonstrators and coöperators-----	4,620
Acreage grown under improved methods-----	26,976
Number pounds seed cotton per acre-----	766
<b>(Wheat)</b>	
Number demonstrators and coöperators-----	1,402
Average yield per acre in bushels-----	21.7
<b>(Oats)</b>	
Number demonstrators and coöperators-----	9,289
Acreage grown under improved methods-----	18,494
Average yield per acre in bushels-----	44
Number bushels seed treated for smut, rust, etc-----	41,303
<b>(Alfalfa)</b>	
Number demonstrators -----	512
Acreage grown in demonstrations-----	1,245.3
Average yield per acre, (5 cuttings) tons-----	3.5
<b>(Cowpeas)</b>	
Number demonstrators and coöperators-----	5,291
Acreage grown under improved methods-----	55,122
<b>(Velvet Beans)</b>	
Number demonstrators and coöperators-----	4,965
Acreage grown under improved methods-----	107,871
<b>(Peanuts)</b>	
Acreage grown under improved methods-----	1,995
Average yield per acre in bushels-----	44.5
<b>(Orchards)</b>	
Number demonstrators and coöperators-----	731
Number trees in demonstrations-----	59,529
Number orchards inspected -----	1,395
Number orchards pruned -----	750
Number orchards sprayed -----	613
Number orchards wormed -----	442
Number orchards planted -----	373
<b>(LIVESTOCK—Horses)</b>	
Number brood mares brought into state-----	863
Number demonstrations in feeding-----	179
<b>(Dairy Cattle)</b>	

Number pure bred dairy cattle brought into state----	1,052
<b>(Beef Cattle)</b>	
Number pure bred beef cattle brought into state----	1,427
<b>(Dipping Vats)</b>	
Number built during year in agents' territory-----	440
<b>(Hogs)</b>	
Number pure bred brought into agents' territory during year -----	3,686
<b>(Livestock Diseases and Pests)</b>	
Cattle treated for blackleg by demonstrators-----	2,150
Cattle treated for lice by demonstrators-----	20,488
Hogs treated for cholera (single treatment)-----	142,866
<b>(Fertilizer)</b>	
Number farmers advised regarding use of fertilizer---	20,748
Number tons manure made on farm by agents' advice (compost) -----	2662,600
<b>(Lime)</b>	
Number demonstrators using lime-----	1,970
Number acres treated with lime-----	17,351
Number tons applied -----	36,616
<b>(Organizations)</b>	
Number farmers' clubs -----	474
Number club members -----	10,212
<b>(Farm and Farmstead Improvements)</b>	
Silos built by demonstrators-----	158
Number buildings erected from plans furnished by College -----	803
Number buildings improved and painted through the agents' efforts -----	1,859
Number home water systems installed by demonstrators -----	265
Number home lighting systems installed-----	93
Number homes screened by demonstrators' influence--	1,570
Number drainage systems installed-----	242
Number acres drained -----	15,799
Number acres terraced by demonstrators-----	45,169
Number home gardens planted-----	5,945
<b>(Miscellaneous Demonstration Work)</b>	
Number visits by agents to demonstrators and co-operators -----	52,670
Number visits by agents to other farmers and business men -----	31,519
Number miles traveled by agents in own conveyances--	494,879
Calls on agents at offices and homes-----	70,752
Number meetings held -----	2,276
Total attendance at meetings-----	177,468
Number field meetings or field schools-----	1,320
Total attendance -----	5,961
Number official letters written-----	36,011
Number articles written for publication-----	1,745
Number of circular letters sent out-----	22,855
Number bulletins and circulars sent out (U.S.D.A.)--	91,600
Number bulletins and circulars sent out (Georgia State College of Agriculture)-----	65,303
Number visits to public schools-----	5,751
Number pupils, teachers and parents present at school meetings -----	65,226
Number county fairs held in state (agents coöperating	125
Number prizes won by club boys and girls-----	5,366

### Prizes, Scholarships and Gifts.

The Southern Railway scholarship fund, known as the William Wilson Finley Foundation, was invested by Dr. L. G. Hardman, as per the direction of the trustees, in two bonds of \$500.00 each of the Commerce Electric Light and Power Company. These bonds bear five per cent interest, and were sold at a considerable premium which Dr. Hardman generously absorbed. It will be possible under the rules laid down by the Board of Trustees to make the first award next September. By your direction the interest on the foundation is to be loaned to students at the rate of four per cent repayable on the conditions applying in the case of the Brown fund notes.

The Virginia-Carolina Chemical Company has made its usual contribution of \$500.00. The Cotton Seed Crushers' Association and Barrett Company have each given \$25.00 and H. G. Hastings & Company has continued their prize of \$20.00. The Georgia Bankers' Association contributed \$860.00 to be used as a loan fund for worthy students, repayment to be made on the basis of the Brown fund loans. Provision has been made by the Georgia Bankers' Association for the continuance of their scholarships. A number will be awarded in September in accordance with the rules previously laid down. Short term scholarships to the value of \$3,856.44 were received and awarded to the boys and girls attending the short courses held last August. About 300 scholarships to the value of \$7500.00 have been obtained for the present year, but only \$402.95 has been paid into the treasury. Contributions for the support of men and women county agents have been paid in to the amount of \$3500.69. The State Fair Association contributed \$1300.00 to the support of county agents, and for scholarships, prizes, and the installation of the College exhibit at Macon last fall. The Southeastern Fair Association contributed \$1000.00 towards the maintenance of the extension work. The total amount of money contributed from all sources is \$14,381.28, exclusive of the short term scholarships still to be paid into the treasury.

The American Shorthorn Breeders' Association donated to the division of animal husbandry a cow and calf worth \$500.00; the Hampshire Breeders' Association gave a sow worth \$100.00, and the DeLaval Separator Company an emulsifier worth \$300.00. The division of agronomy received a donation of \$2000.00 from the Cotton Seed Crushers' Association for the purpose of making a seed survey map of Georgia and determining the oil content of leading varieties of cotton seed. This division also secured a donation of \$350.00 worth of sulphate of ammonia from Barrett & Company and a \$300.00 discount on some tile purchased from the Chattanooga Sewer & Brick Company. The division of forestry received donations of a large amount of exhibit material for the museum. Mrs. Helen Gould Talcott gave the division of poultry husbandry



a trio of Mammoth Bronze turkeys worth \$25.00. One incubator and two brooders were donated to this division by the Buckeye Incubator Company. The horticultural division received gifts of spraying materials, plants and dusting machinery. Loans in the form of cream separators and farm machinery have been made to the divisions of animal husbandry and agricultural engineering. The latter division has at least \$12,000.00 worth of equipment which has been placed here by various firms for the purpose of student instruction.

We have received many courtesies from those with whom we transact our business and this has resulted in a very considerable saving to the state. It is needless to say that their coöperation and financial assistance is greatly appreciated, as we would have been unable to obtain a very considerable amount of the equipment now available or to conduct some of the most important lines of investigation which have been prosecuted during the year but for the contributions made through the agency of the various firms and organizations mentioned.

### **Coöperative Enterprises.**

All the coöperative enterprises reported on last year have been successfully maintained. The tendency of Congress to endow the various bureaus and divisions of the Department of Agriculture more liberally is proving to an institution with the limited income which we enjoy a veritable embarrassment of riches. The policy of the Department, as you know, is to expect the state to offset on a half and half basis all the funds spent through the agency of this institution. Several lines of coöperative effort have been offered to us which we have found difficulty in accepting by reason of our restricted income. No addition has been made to the funds of the state extension division for several years past, and unless the legislature is willing to increase our maintenance for this purpose we will not be able to avail ourselves of the considerable sums of federal money which would otherwise be brought into Georgia and expended in agricultural development work. This is a matter of such serious concern that I think I should emphasize it very particularly that you may bring it into the specific attention of the Georgia General Assembly in the hope that they will not allow Georgia farmers to suffer the loss of these sorely needed funds which in the event of our failure to offset the same will be expended to the advantage of the farmers of some other commonwealth.

Physical surveys of the following areas have been completed: Jasper 410 square miles, Lowndes 455 square miles, Burke 883 square miles, and Mitchell 542 square miles, or a total of 2290 square miles. This is 300 square miles more than were mapped last year. An authorization has been issued for the survey of Floyd county, and it is hoped that Madison county, which has been partly

worked, can be completed during the summer. Reports on the chemical surveys of Habersham, Polk, Dougherty and Jones counties have been printed and distributed, and the analytical work on the soils of Jackson and Jasper counties and the Berry School area has been completed. We can not print these reports as rapidly as is desirable because of lack of funds for this purpose. This is a defect which the legislature should remedy for obvious reasons as the soil surveys are fundamental to the establishment of a basis type of agriculture in Georgia. Bulletins on the physical surveys of Turner, Laurens, Clay, Wilkes, Washington and Polk counties, have been issued by the U. S. Bureau of Soils. Manuscript reports on Meriwether, Brooks and Richmond counties have been approved but not printed. A summary of the soil survey work completed to date shows that since 1912, 31 counties comprising 12,540 square miles have been worked. Up to the present time 264 soil types have been found, and analyses made to date representing 138 of these types.

By your advice an additional analyst was appointed on September 1st, and the chemical work is now being pushed forward more rapidly, but owing to the painstaking detail and exactness required in such work, several additional chemists are needed in order to keep the chemical surveys abreast of the physical surveys. The demand for soil surveys is increasing, a considerable number of requests now being on file. The people in a number of counties are becoming very restive over the delay, for which we can not blame them, but they do not seem to understand that the failure to expand this work is not chargeable to the College, but to the fact that the legislature has not made the needed increase in appropriations.

The field agents in dairy and beef cattle production maintained in coöperation with the Bureau of Animal Husbandry of the Division of Animal Industry are doing excellent work. As a result of the efforts of the two field agents in dairying, 1052 dairy cattle were brought into the state. These specialists supervised the construction of twelve dairy barns and the remodeling of ten others; established calf-raising demonstrations on seven farms; placed registered dairy bulls on nine farms; kept records of one hundred and fifteen dairy cows, twenty-two of which were sold to the butcher when the owners found by actual records that they were losing money by keeping them. They have also aided in the establishment of the College coöperative creamery, a report on which is made elsewhere.

The two beef cattle extension men have been actively at work in the tick-free area. It is significant and noteworthy that 1427 registered beef cattle were brought into the state within the year. It is difficult to estimate the influence which the dissemination of this number of pure-bred animals throughout Georgia will exert

on the type and quality of our beef cattle. During the year 4995 cattle were fed on standard rations. These agents have also been active in the establishment of pasture demonstrations and the promotion of the more extensive cultivation of crops suitable for silage. Many lectures have been given on the breeds of beef cattle and methods of feeding and managing the same. Calf clubs were organized in forty counties with a total enrollment of one thousand members. Excellent work has been done in the promotion of the swine industry. The records show that 3686 hogs were introduced for breeding purposes on the advice of representatives of the institution. Of this number 1501 were registered. During the year 181,870 hogs were fed according to directions furnished by the extension workers.

The pig club work is also carried on in coöperation with the Division of Animal Husbandry of the Bureau of Animal Industry. This work was started in 1914 with an enrollment of 977. In 1915 the enrollment was 1468, and in 1916, 2605. In 1917 the enrollment will reach between 5000 and 6000, or an increase of 100 per cent over last year. This work was originally begun in twelve counties, and is now being carried on in every county having an agent. The enrollment has practically doubled every year since the work was started. Its educational value is illustrated by the experience of Evans Jackson, near Madison in Morgan county, who bought a pure-bred Berkshire pig weighing twenty-five pounds when six weeks old. He followed the pig club instructions sent out by the College and when it was ten months old it weighed 320 pounds. It cost \$7.50 at weaning time and at ten months was valued at \$60.00. His record showed a cost of \$10.25 for feed, which, added to the original cost, left a profit of \$42.25. He was awarded the sweepstake prize at the State Fair. Before the pig club work was started in Georgia there were thirteen counties which made their own meat; a year later not less than forty counties made sufficient meat to supply home needs. Of the twenty counties in which pig clubs were organized during 1915, sixteen of them made their own meat supply the following winter and ten had a surplus. This illustrates what a wonderful influence work of this kind, when brought to the individual attention of the boy and through him to his father, has exerted on the swine industry of the state.

Another encouraging sign is the increased interest manifested by the banks which in practically every county where the work was carried on in 1916 either loaned money or supplied pigs. One of the banks in Waycross bought sixty head of pure-bred pigs and sold them to pig club members on easy terms. Thirty-seven of these were exhibited at the county fair and twenty-five at the South-eastern Fair in Atlanta. The growth of this work is well illustrated by the fact that in 1916 there were 91 exhibits in Atlanta, 35

in Valdosta, and 11 at the State Fair, or a total of 237 head. The pig club members from Grady captured 75 ribbons last year, and won in all \$400.00 in prizes. You will no doubt be interested to know that the number of hogs in Georgia increased by 235,000 head during 1916, Iowa alone showing a larger gain. Since 1913 the number of hogs in the state has increased by over 800,000 head. There is every reason to anticipate a record increase this year, since many farmers have been taught by county agents how to use preventive serum and all the pig club boys are fully informed with regard to this matter. The adaptability of Georgia for pork production on a tremendous scale is nicely illustrated by the following figures showing the relative cost of a pound of gain in several states where pig clubs have been organized.

#### Summary of Cost of a Pound of Gain and Profits Obtained by Pig

Club Boys in 1916		
STATE	Cost Per Pound of Gain	Average Profit
	Cents	
Georgia	3.64	\$21.93
Louisiana	Not given	
Indiana	4.34	11.04
Kentucky	5.00	
Massachusetts	6.80	6.90
Nebraska	4.35	12.43
North Carolina	5.00	
Oklahoma	6.60	18.82
Oregon	6.70	6.04
Alabama	4.60	
Arkansas	3.70	5.00
California	5.75	7.88
Average all states	5.12	11.25

The poultry club work is carried on in coöperation with the Division of Animal Husbandry of the Bureau of Animal Industry. This work was begun in nine counties in 1915. It is now being carried on in twenty-four counties. Further expansion of the work was rendered impractical by reason of the withdrawal of Mr. D. J. Taylor, which necessitated the appointment of a new field agent. Records were sent in last year by 238 club members. There were 11,831 eggs set, 7890 of which hatched and from which 5581 chickens were raised. Including the chickens and eggs sold, the value of the stock and equipment on hand January 1, 1917, it appears that the profit amounted to \$7873.39, which was sufficient to encourage the members to take up what we term second-year work. First year club members are required to set at least three settings of eggs from standard-bred chickens, and keep one cockerel and seven pullets for the second year's work. A good example of the first year club members' reports is shown for your information:



MEMBER	Eggs Set	Chickens Hatched	CHICKENS SOLD No.	Value	CHICKENS KEPT Ckl.	Pullets	Feed Cost
Nellie Hattaway	45	39	14	\$4.20	3	17	\$1.85
Emmaline Hale	45	33	8	2.80	3	12	2.10
Irene O'Neal	46	37	10	3.00	4	23	2.75
Susie Hill	60	50	40	15.00	2	8	3.00
Leon Haden	45	33	5	9.85	4	20	3.50

In addition to the records kept by the first year club members, second year club members kept records of the number of eggs laid by their hens, the cost of feed, and the sales of eggs and chickens. An example of what was accomplished by some of the second year members is presented below:

MEMBER	Eggs Set	Chickens Hatched	CHICKS SOLD No.	Value	CHK KEPT Ckl.	Pullet	Laid, dz.	EGGS Value	Feed Cost
John Henderson	82	60	40	\$20.00	1	14	63	30.50	\$10.00
E. Richardson	126	101	25	10.00	2	9		22.65	23.35
Clemmie Massey	112	80	15	25.00	10	40	55	15.00	19.00
Annie Snellings	160	112	36	15.60	42	28	46	9.00	9.20
Wallace Godard	181	116	43	17.05	10	25	149	28.70	37.75
Love Woolridge	156	122	25	40.00	8	58	72	31.00	22.00

The record of what John Henderson, twelve years old, of Pike county has accomplished is worthy of your consideration. In the spring of 1916 he set 30 White Orpington eggs, hatched 17 chicks, and kept 2 cockerels and 12 pullets. He exhibited one cockerel, one pullet, and one pen at the State Fair and the Southeastern Fair, and won first prize on singles and pen at the State Fair, and also prizes at the Southeastern Fair. He set 82 eggs this spring from which he sold \$20.00 worth of chickens. Including eggs and chickens sold this year so far, he has made \$40.00 above the cost of feed and has increased his flock. The value of the training which this individual and hundreds of others who have taken up the poultry club work are deriving from it, is self-evident, though difficult of portrayal except in a general way. The record of the exhibits made by the members of the poultry clubs at the principal fairs follows:

Fairs	Members Exhibiting	Chickens Exhibited	Eggs Exhibit'd.	Prizes
Ga. State Fair	75	338	19	\$152.00
Southeastern Fair	75	261	6	225.00
10 County Fairs	135	526	12	332.00

The quality of the chickens shown by the club members was very good. At the Southeastern Fair, for instance, \$61.00 was won against the poultry breeders in the regular poultry show. This demonstrates that the work is organized efficiently and is bound to exert a marked influence in the near future on our poultry industry.

As a result of the coöperative work carried on with the Office of Public Roads, U. S. Department of Agriculture, Prof. J. V. Phillips, senior drainage engineer, established his headquarters at the College and is now working on drainage problems in conjunction

with certain officers of the Division of Agronomy. While the work has been in progress less than a year a very creditable showing has been made. Drainage projects are now in progress in twenty-six counties, covering 17,070 acres of land. The work has already been completed in a number of areas, and land which is worth comparatively little has now been made both highly valuable and productive. It is self-evident that the drainage of these wet areas will also improve the health of the communities concerned and bring land, which has lain idle up to the present time, under the plow. Georgia, as you probably know, has about 7,500,000 acres of land which need drainage. It can probably be reclaimed at a cost of about \$25.00 per acre on the average. This land when reclaimed will enable the state to produce anywhere from 200,000,000 to 350,000,000 bushels more corn than is now raised. If this were done Georgia would naturally become one of the greatest live stock states in the Union. The wealth of the state would be enhanced by several hundred million dollars, a menace to the health of many communities removed, and the agriculture of the state properly balanced up.

The several lines of work reported on are maintained out of funds derived from direct state appropriations made by the General Assembly of Georgia to the College for general extension work. Some of the funds available under the Smith-Lever Act have also been used. The Federal bureaus through which we are working along the lines reported upon above, are expending in coöperation with the College the equivalent of \$26,800.00, exclusive of the funds set aside for printing, which amount to several thousand dollars a year. As already explained, these funds must be duplicated dollar for dollar, and hence the necessity for the state providing a larger endowment to the College for work of this character. At the present time Georgia is receiving from federal sources, including the funds available through the Office of States Relations Service, \$136,150.00. This state appropriated \$46,150.00 to offset this sum, leaving \$90,000.00 to be raised from other sources. It should be borne in mind that the initial appropriation of \$10,000.00 made available under the Smith-Lever Act does not have to be offset by the state.

Our coöperative work, including that of the clubs, as you will see, is carried on in contact and association with a great variety of organizations. Every one who has been asked to support and aid us in the promotion of these several activities has responded in a gracious and liberal manner. But for the hearty support we have received from both state and county school officials, county commissioners, boards of trade, chambers of commerce, the railroads, bankers and other business men, and farmers' organizations, the extensive and varied lines of effort reported on above could not be inaugurated and carried to a successful issue. I desire to make special acknowledgment of the valuable assistance

rendered the institution and its officials by all the agencies enumerated. I wish it were possible to add to this list the names of thousands of individuals who have served acceptably without recognition.

A summary of the results obtained on the test farms of the Central of Georgia Railway, plans for which were formulated by the College and which are inspected each year by representatives of the Division of Agronomy is presented for your information. Twenty-two of them were operated in Georgia in 1916, containing an average of 35 acres per farm, or a total of 770.3 acres. The total value of the crop was \$32,428.63. The cost of the crop was as follows: Man labor, \$2,831.64; horse labor, \$1,945.77; fertilizers, \$2,159.07; harvesting, \$2,521.50; seed, marketing, etc., \$1,881.45; or a total of \$11,564.83. The income from the rent of the land was \$2,702.27, and the profit was \$18,826.84, or a total of \$21,529.11.

Public interest in the extension work remains unabated. Everywhere it has been organized and had a chance to demonstrate its value to the community, it has been enthusiastically received and liberally supported out of local funds. The problem today is to meet the demand made upon us from our end of the line. If the legislature offsets, as it doubtless will, the increases available under the Smith-Lever Act for the federal fiscal years 1917-1918 and 1918-1919, it will afford some relief, but even with these funds in hand it will not be possible to satisfy the demand for agents on the part of many counties which are without their services at the present time. Moreover, experience has shown that the salaries paid our agents are too small in view of the fact that they are required to keep an automobile in order to travel over the county as much as is absolutely necessary. When the upkeep and wear and tear on a machine of even the cheapest type which can be purchased is taken into consideration, it appears that the agents in many instances are not netting over \$50.00 to \$75.00 a month and it is not reasonable to expect them to continue in this work at the salaries they are now receiving. This is a matter which should receive your earnest consideration, for we face the alternative of either losing a good many of our experienced agents or paying them more money. If we take the increase available under the law and use it for the expansion of the work, we need not be surprised at the withdrawal of many of our agents. If we fail to appoint additional agents, we will not be able to satisfy the demands of the counties asking for aid. This is a situation which should be fully explained to the legislature that they may take appropriate action thereon.

Funds have been received for extension work through the office of many county ordinaries and commissioners, boards of education, boards of trade, fair associations, corporations of various kinds, railroads, women's clubs, banks and individual citizens. The appropriations from local sources for men agents total \$67,000.00 and



for women agents \$23,000.00. This does not include prizes amounting to \$15,142.00 for boys, and to \$2,570.00 for girls. The value of the premiums and scholarships provided at the county, district and state fairs for exhibits by various organizations amounted to \$17,712.00. If the funds contributed for prizes and scholarships were included it appears that \$107,712.00 has been given, of which \$90,000.00 was available for the maintenance of extension work in agriculture and home economics. To this should be added the funds available to July 1, 1917, under the Smith-Lever Act, amounting to \$56,151.38 from federal, and to \$46,151.38 from state appropriations, or a total of \$102,302.76. Indirect congressional appropriations proper amount to \$26,800.00 and the Office of States Relations Service for demonstration work to \$53,200.00, making a total of \$290,014.76, or \$75,666.76 in excess of the funds available last year. This does not include the state appropriation of \$42,500.00 for general extension work, including farmers' institutes. The total sum available for the furtherance of the extension work for the year now closing, therefore, was \$332,514.76. The sum of \$144,258.56 will become available after the first of July under the terms of the Smith-Lever Act. It will be necessary for the state to appropriate \$67,129.28 for the federal fiscal year 1917-1918 in order to obtain the funds due from the government. There will then be available for extension work in Georgia for the fiscal year 1917-1918 approximately \$374,470.56. Of this amount it is anticipated that \$245,000.00 will be spent for the maintenance of men and women county agents.

The amount required for the maintenance of the administrative offices and the salaries and traveling expenses of the specialists located at Athens is not included in the above.

### **The College Farm**

The financial statement indicates that progress is being made in the development of the College Farm. The receipts for the fiscal year are \$13,349.18, representing an increase of \$2,346.49 over the receipts for 1916. The receipts from the dairy herd this year are \$8,187.54 as compared with \$7,302.46 in 1915-1916, which represents an increase of \$885.50 over the previous year. The profits from the College Farm are \$2,980.99. The sale of farm products, exclusive of live stock, amounts to \$1,643.39, or an increase of \$397.13 over 1916. The following tabulated statement indicates the progress that has been made from year to year since 1907 in the development of the farm. It is interesting to note that for the year ending June 1, 1908, the total farm receipts amounted to \$1,799.37, and that without exceptions for each succeeding year these receipts have continued to increase until for the present year they amount to \$13,349.18. At the outset one-fourth of the total revenue was derived from the sale of cotton. At present barely one-tenth of the farm receipts are derived from that source.



Receipts from the College coöperative creamery are \$4,605.83. This added to the total farm receipts make a grand total collected by the animal husbandy division for the year of \$17,945.01.

### Receipts From College Farm.

		Sale of cotton Sale of      and      Total Livestock cottonseed Receipts		
	Dairy			
June 1st, 1907-08	\$1124.44	\$ 72.29	\$ 469.62	\$ 1799.37
June 1st, 1908-09	3891.40	341.52	848.75	5239.42
June 1st, 1909-10	4331.02	319.90	1831.83	6709.93
June 1st, 1910-11	4346.87	762.51	1779.95	7149.58
June 1st, 1911-12	5099.44	1846.23	1421.14	8581.41
June 1st, 1912-13	5675.46	1520.30	1113.45	8581.53
June 1st, 1913-14	6036.57	2667.61	1623.28	10335.46
June 1st, 1914-15	6562.60	2791.57	687.73	10173.60
June 1st, 1915-16	6700.41	3056.02	1043.93	11002.69
June 1st, 1916-17	7392.04	4313.75	1359.59	13349.18
Total sales	51160.25	17691.70	12179.27	82922.17

Increase in 10 years	6267.60	4241.46	889.97	11549.81
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At the present time every foot of the College farm is under fence or is in cultivated fields. While much of it is still in a low state of cultivation, there is no unoccupied land in the entire area. The reclaiming of this land, removing loose stones and stumps, building fences, chopping out underbrush and erecting adequate buildings, has been both laborious and expensive, but the work is of a permanent character and the investments that have been made thus far will continue to pay dividends for years to come.

A little over a year ago pasture experiments were established with a view of making the sparsely timbered area pay a greater return. The underbrush was chopped out and tame grass seeded. Such gratifying results were obtained from the first seedings that additional tests have been undertaken. There are more than one hundred acres of land of this character on the College farm. It is felt that this demonstration will be of much value to the live stock interests of the state since there are thousands of acres which can be handled in a similar manner to advantage.

During the past year some progress was made in building new roads and improving the roads already graded. Electric lights have been installed in the main barn, which was a much needed improvement.

Under the existing food crisis more attention has been centered on food crops. The acreage for 1917 is as follows: Corn, 95 acres; silage, 38 acres; oats, 50 acres; winter hay, 24 acres; cotton, 15 acres; peas, 4 acres; rye, 17 acres; alfalfa, 12 acres; tame grass, 5 acres. Total, 260 acres.

Crops turned under or to be planted after oats: Rye, 17 acres; peas, after oats and rye, 70 acres. Total 87 acres.

Total crop acreage for the year, 347 acres.

## Live Stock

It is felt that substantial progress has been made in developing the herds and flocks of the College farm during the past ten years. There are 146 head of animals on the farm at present, of which 101 are pure bred and registered. The total inventoried value of the live stock is \$19,870.00. During the decade the average annual outlay for the purchase of livestock has been \$1,078.36, while the sales have averaged \$1,769.00. Hence, very valuable herds have been built up for the state without entailing any permanent investment of capital. This is an achievement worthy of note and illustrates the latent possibility of animal industries in Georgia. Your attention is directed to the following summarized financial statement of the livestock operations carried out on the College farm since June 1st, 1907. You will observe that the annual increment in favor of the state has been \$1,795.30.

### Financial Statement of Livestock Operations on College Farm From June 1, 1907 to June 1, 1917.

Value of livestock on College Farm		
September 1, 1907-----	\$ 1,917.00	
Expenditures for purchase of livestock		
from Sept. 1, 1907 to June 1, 1917-----	10,783.00	
Value of livestock June 1, 1917-----	\$19,870.00	
Sale of livestock from Sept. 1, 1907		
to June 1, 1917-----	17,691.70	
Net increased value plus sales above ex-		
penditures for purchasing livestock-----	24,861.10	
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	\$37,561.70	\$37,561.70
Average amount expended yearly for the purchase of		
livestock -----	1,078.36	
Average annual sales of livestock-----	1,769.17	
Average net yearly increase in inventoried value		
of livestock -----	1,795.30	

The inventoried value of livestock by years is also shown in tabulated form. On September 1, 1907, there were 42 animals on the College farm, none of which were registered. They were valued at about what they were worth on the open market and the total amount was \$1,917.00. At the present time the stock owned by the College is worth \$19,870.00, or nearly ten times as much as on June 1st, 1907. In this connection bear in mind the noteworthy fact that during the fiscal year now closing \$4,313.75 worth of animals were sold by the College. While fewer animals are now maintained than previously, bear in mind that 75 percent of the cattle and all of the hogs are now pure-bred and registered.

### Value of Live Stock, 1907-1917

	Value	Number	Percent increase in value
September 1, 1907	\$1,917.00	42	
1908-1909	5,082.50	71	165.1
1909-1910	6,937.50	132	36.5
1910-1911	10,042.00	213	44.7
1911-1912	10,265.00	159	2.2
1912-1913	12,005.00	167	16.9
1913-1914	13,580.00	170	13.1
1914-1915	14,532.00	163	7.0
1915-1916	17,310.00	145	19.1
1916-1917	19,870.00	146	14.8

Total increase in ten years	\$17,953.00	104	936.5
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A tabulated statement is also appended showing the number and value of the different kinds of animals sold during 1915-1916 and 1916-1917. A total of 79 animals were sold in 1916-1917 for \$4,301.75, as compared with 93 animals for \$3,056.02 the year before. As the quality of stock bred by the College improves more satisfactory prices are obtained. Aside from the financial returns the maintenance of herds of choice animals is necessary to properly instruct students in the principals of stock judging and animal breeding. Naturally the interests of the farmers of the state are best advanced by the distribution of high grade animals.

### Sales of Livestock

#### 1915-1916

Kind	No.	Pure Bred	Grade	Price per Head	Total Value
Dairy Cattle	25	13	12	\$24.08	\$ 602.05
Beef Cattle	35	1	34	37.31	1,305.85
Hogs	28	27	1	11.46	320.82
Horses	5		5	150.00	750.00
Stud Fees					77.30
				Average	
Total	93	41	52	\$32.87	\$3,056.02

### Sales of Livestock

#### 1916-1917

Kind	No.	Pure Bred	Grade	Price per Head	Total Value
Dairy Cattle	18	12	6	\$44.20	\$ 795.50
Beef Cattle	23	7	16	88.94	2,045.65
Hogs	25	5	20	7.68	192.10
Horses	5	2	3	232.00	1,160.00
Stud Fees					105.00
Goats	8		8	1.94	15.50
				Average	
Total	79	26	53	54.60	\$4,313.75

Receipts from the dairy herd are also shown in tabular form for a ten-year period. This table shows only the sale of dairy products. In addition to the receipts of \$7,392.04, it should be remembered that \$795.50 worth of animals were sold from the dairy herd, mak-

ing a total income of \$8,187.54 for the year. Specific attention is called to the annual returns per cow for the ten-year period. For the first year the total amounted to \$86.49 per cow. This has gradually increased until during the past year the sales per cow amounted to \$205.33. The herd was established with native cows that cost an average of \$34.50 per head. In 1908 a few registered Jersey and Holstein females were purchased. High-class bulls of the two breeds have been in constant use in the herd. By the application of the fundamental principals of breeding and feeding, the average earning capacity per cow has been increased almost two and one-half times in a period of ten years.

### Receipts from Dairy Herd 1907-1917

	Total Receipts	No. Cows	Return per cow
June 1st, 1907-1908	\$1124.44	13	\$ 86.49
June 1st, 1908-1909	3891.40	30	129.71
June 1st, 1909-1910	4331.02	30	144.37
June 1st, 1910-1911	4346.87	30	144.89
June 1st, 1911-1912	5099.44	32	159.35
June 1st, 1912-1913	5675.46	32	177.36
June 1st, 1913-1914	6036.57	34	177.53
June 1st, 1914-1915	6562.60	34	193.01
June 1st, 1915-1916	6700.41	35	191.44
June 1st, 1916-1917	7392.04	36	205.33
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Total increase ten years	\$6267.60	23	\$118.84

At the present time seven breeds of pure bred live stock are being maintained, including Holstein, Jersey, Shorthorn, and Hereford cattle, Berkshire and Hampshire hogs, and percheron horses. Two piney woods scrub females have been secured for demonstrations in improving range beef cattle. It is desirable that other breeds of hogs be added during the coming year.

### The Poultry Plant

A laying house 130 feet long by 14 feet wide was constructed during the year. Yards have been built both in the front and rear of this house. It is divided into thirteen pens while yards of the same dimensions adjoin each pen. This plan of construction was followed so that the various pens and yards may be used for experimental purposes, and also to provide a satisfactory medium for the instruction of individual students. The house has a capacity of 400 laying birds. The cottage facing Lumpkin street was re-shingled and decorated and a hot-air furnace installed therein. It is now used as an office building for the poultry husbandry division. All the buildings of the plant have been painted and put in first-class repair.

There were 719 hens kept during the past winter. The egg yield from May 16, 1915 to May 15, 1916 totaled 42,912. The egg yield for the past twelve months totaled 57,368. While the egg yield



has not been as high as can be attained, when the severity of the winter and the reorganization of the plant incident to a change in its supervision are taken into consideration, an increase of 33 1-3 per cent in egg production must be regarded as fairly satisfactory. At the present time there are 1075 young birds, and it is planned to carry all the pullets among these through next winter. A new breed, the White Wyandotte, has been introduced. These birds are of the best laying stock in the United States. The adaptability of this breed to Georgia conditions will be studied. Four hundred and twenty-four pullets were trap-nested last winter, an increase of 314 over the previous year. Eighteen pedigreed cockerels from high-laying strains have been purchased and used to improve the College flocks. A trio of Mammoth Bronze turkeys from birds that won at the Madison Square garden show were given the College by Mrs. Helen Gould Talcott. A trio of peafowls have been purchased. A world record has been broken by a Barred Plymouth Rock pullet hatched at the poultry plant on January 1st which began laying on April 25th, when three months and twenty-five days old. A second pullet began laying in four months after hatching, breaking all previous records for this or any other breed of chickens.

The instructional work has been expanded during the year, the number of hours being slightly more than doubled. The entire course of instruction as offered in the catalogue was given for the first time this year. Special courses were organized for the boys' and girls' short courses, the farmers' short course, the farm women's short course and the home economics agents' course. In all 379 regular and short course students have received instruction in poultry husbandry. The head of this department attended 31 farmers' institutes during June, July and August, reaching in this way 4411 people. Farm flocks are being established under the supervision of the poultry division at the district agricultural schools at Barnesville, Tifton, Madison, Monroe, Clarkesville and Powder Springs. These flocks will be used for instructional purposes at these schools and for demonstrations by the division at different times of the year. A good deal of consideration and attention has also been given to the work of the poultry clubs reported on elsewhere.

### Experimental Plats.

Field work is being conducted at Athens, Tifton and Quitman with variety tests, plant breeding and forage production. Fertilizer tests are being made in twenty-six counties. The work affords a correct basis for obtaining data essential to the proper instruction of students and for use by our field workers in the extension division. It also enables the College to illustrate the value of certain methods of practice to the thousands of visitors who now come annually to the institution. Since fighting the boll weevil successfully

is based on the establishment of crop rotations, the best plan to follow to obtain the end in question is being carefully studied. The rotation being chiefly emphasized at present is cotton, corn, small grain and cowpeas. Another one which promises well is corn and velvet beans, cotton, small grain and cowpeas.

The alfalfa tests do not indicate that this crop has responded to applications of lime as freely as was expected. Inoculation of the seed is essential. The crop has not responded in a marked degree as yet to applications of acid phosphate. The tests with various strains of alfalfa show a wide difference in their adaptability, the narrow leaved sorts apparently being better suited to Georgia conditions than the broad-leaved strains. Forty varieties of soy beans were selected from an importation of 250 varieties by the U. S. Department of Agriculture and are being tested for grain, forage and oil production. Experiments with Sudan grass indicate that soil preparation is apparently a more important factor in securing good yields than the date of seeding.

The variety tests with corn, cotton and cereals have been continued. Excellent progress has been made in the standardization of certain varieties so that the College is now in position to recommend with considerable assurance those strains of these crops which are best adapted for cultivation to the different soil and climate areas of the state. The plant breeding work with cereals received a serious setback by the freezes of the past winter which killed out most of the improved strains of oats and barley. Fortunately, the wheat and rye were not seriously affected. The cotton breeding work is being continued on an enlarged scale, seed of College No. 1 having been quite widely distributed this spring. It possesses merit which marks it as a variety distinctly superior to Sunbeam. The strain of seed developed run especially high in oil.

The fertilizer tests have been continued. They show that in a majority of instances nitrogen appears to be the limiting factor, though the largest financial returns seem to be secured from the use of complete fertilizers on the majority of the soil types on which tests have been conducted up to the present time. These tests indicate that where the land is well prepared it is certainly as satisfactory to apply all the fertilizer at the time of planting cotton, corn and oats as to reserve and use part of it in the form of a side application. Top dressings of nitrate of soda should be applied in South Georgia in February and in North Georgia in March.

Extensive tests with velvet beans are in progress. The best results have been obtained so far with the medium-early varieties. Kudzu has been used as a soil-building crop on waste land. No satisfactory data has been obtained as yet. Soil building tests with sweet clover have been commenced. Its value for this purpose in Georgia is not known at present. The value of both the saccharine and non-saccharine sorghums for forage purposes is

being inaugurated this year, and tests with varieties of peanuts for seed and oil production have been instituted.

Variety tests with corn, cotton and small grain, soy beans, velvet beans, peanuts, chufas and rice are being carried on at Tifton. The experiments with rice are not located on the test plats, but in various sections of south Georgia where suitable land areas for this work have been found. The rice experiments are being carried on in coöperation with the Office of Cereal Investigations of the U. S. Department of Agriculture. The work at Quitman is confined to variety tests and rotation systems with corn, cotton and small grains.

A summary of the results obtained with wheat, oats and rye at Athens, Ashburn and Quitman follows:

#### Number of Varieties Tested

	Athens	Ashburn	Quitman
Wheat	14	12	13
Oats	15	12	11
Barley	15	8	
Rye	3	3	3

#### Breeding Work at Athens

	Wheat	Oats	Barley	Rye
Number of increase rows	31	31		
Number of rod rows	201	196	44	29
Number of head selection	124	262	50	100

#### Yield of Wheat

Athens	Ashburn	Quitman
3 yrs.	Bushels 1915-16	Bushels
Dietz Mediterranean	28.4	Bluestem 21.6 Ga. Red 9.4
Australian Red	28.2	Georgia Red 21.4 Bluestem 9.3
Leap's Prolific	28.0	Red May 18.5 Red May 7.2
Mammoth Red	27.7	Australian Red 16.6 Durun 6.6
Georgia Red	27.5	
Fulcaster	27.3	

#### Yield of Oats

Athens	Ashburn	Quitman
5 yrs.	Bushels 1915-16	Bushels
Appler	66.7	Fulghum 50.8 100 Bushel 32.2
Tex. Rust Proof	64.9	Burt 48.3 Tex. Rust Proof 27.2
Fulghum	61.9	Early Ripe 43.1 Early Ripe 26.6
Bancroft	61.6	Appler 37.9 Appler 26.5

#### Yield of Rye

Athens	Ashburn	Quitman
1916	Bushels 1915-16	Bushels
Abruzzi	31.0	24.4
South Georgia	30.2	22.4
Virginia	27.4	7.2

## Campus.

The formal garden has been laid out in accordance with the plan approved last June. You will observe that the area has been properly graded and a system of pipes for the distribution of water placed underground. Considerable planting has been done, as much as was practical in view of the extremely wet spring and the limited finances at our command for improvements of this character. A good deal of the planting was done by students in order that they might be the more acceptably instructed with reference to aesthetic matters. It will take several years to complete this work satisfactorily, but when it is done the institution will possess valuable and essential information, not only for the student body, but the people of the state as well. It is needless to point out that we have been inclined to overlook as a rule the importance of the proper beautification of the grounds about the home. Our schools for the most part are bare of ornamental plantings. Aesthetic values have not been appreciated as they should be in the open country nor in our towns and cities, yet at comparatively small cost a splendid variety of native trees and shrubs indigenous to Georgia can be used with the most pleasing effects. It is believed that one of the most important services which the College can render its student body and the thousands of people who visit it annually is to impress upon them how comparatively easy and simple it is to add to the beauty of the landscape and the home grounds through the planting of trees and shrubs on some harmonious plan.

The area about the agricultural engineering building has been graded, tiles placed to carry off the surplus water from the building and grounds, and the necessary plantings made. Though the severe freeze of the past winter injured some of our most tender trees and shrubs, they came through for the most part in good condition. You will observe that the avenue of trees planted on Cedar Street is growing rapidly, adding greatly thereby to the attractiveness of the approach to the main building. The College woodland has been thinned to some extent and properly brushed out. Most of the trees are growing rapidly and it will become an increasingly important asset as the years go by. With the development of our College plant, the desirability of extending our permanent walkways becomes apparent. Certain of the paths down through the woods wash more or less in spite of all we can do. Students traveling over them in wet weather are considerably handicapped, and also bring into the building a considerable amount of mud, which adds to the cost of janitor service. It will not require more than \$2,500.00 to lay all the permanent walks needed at the present time, thereby adding greatly to the appearance of the campus.

## Roads and Drives.

No new roads have been laid out during the year, but considerable work has been done on the improvement of those already in



existence. A good deal of rock has been taken out of the roads along the river drive and considerable necessary drainage work done thereon. The banks have been graded and turned back to an angle of 45 degrees in many places. A large new culvert has been constructed on the road leading to the main College barns. In only one instance does the grade of our roads exceed two percent. They have been laid out essentially as pleasure drives, and it will no doubt be gratifying to you to know that the campus is now regarded in a measure as a pleasure park for the city of Athens and the several thousand visitors who annually come from all parts of the state to inspect the College plant. The roads were projected so as to make the buildings and barns accessible to the public and at the same time emphasize the natural beauty of the campus. At the present time there are four main entrances to the system of drives on the College property, and when the work contemplated is completed there will be five entrances. Arrangements have been made with the Commissioners of Roads and Revenues of Clarke county by which it is believed another section of the river drive can shortly be completed.

The Central of Georgia Railway officials have asked for permission to fill what is known as the cemetery trestle, and trestle A—104. Authority for this was granted provided certain conditions were met. These conditions are intended to properly safeguard the interests and rights of the state and the institution. In addition to completing the section of road indicated, it is hoped that the necessary work of widening, grading and topsoiling those already established can be completed at an early date. When the system of roads on the College farm, now projected, is completed there will be about twelve miles of as beautiful boulevards available for pleasure purposes as can be found anywhere else in the South.

### **Improvements of the Plant.**

No special buildings have been erected during the year, it being necessary to devote such funds as could be secured to the equipment of the veterinary laboratory building and the agricultural engineering building. In spite of the best efforts made in this direction much remains to be done in order to complete the equipment of these two structures in a satisfactory manner. The sudden and extraordinary rise in the cost of all material which has taken place in the last twelve months in a measure accounts for our not being able to accomplish more. You will observe that practically all the buildings belonging to the College have been painted and put in first-class repair. It seemed necessary and essential that this work be done. It cost considerable money but there is a satisfaction in knowing that the expenditures in this direction will not now need to be made again for several years. Reference has already been made to the completion of the egg-laying house at the poultry plant and,

in addition, one laborer's cottage was constructed on the farm. Improvements in the way of installing a considerable amount of drain tile have been made, while the laboratory equipment and facilities essential to the work of many of the divisions have been considerably enlarged. Several thousand dollars have thus been expended on the material improvement of the plant, though the funds thus utilized do not make the proportionate showing witnessed in some other years.

#### Activities of the Several Divisions.

Your attention has been frequently called to the necessity of an institution, such as this, organizing its efforts along three well-defined lines. The first of these calls for the instruction of students in accordance with the requirements of the advanced era in which we live. If the young men who go out as leaders are to be as well prepared to face the new conditions which our rapidly changing civilization imposes, research work of every character and description must be organized and prosecuted with the utmost vigor. The College has done its very best in this direction, and the contributions of its staff to the general knowledge of our agriculture have been well worth while. We need a special endowment for work of this character. At present our efforts in the direction indicated have been carried on by the members of our regular staff, who have cheerfully shouldered this additional burden because they appreciate the fundamental nature of research work.

Any institution which has a state for a constituency must find means for distributing the information which it accumulates. It is now evident to all thinking men that even the illiterate may be successfully informed by those who know the how and why of things so that they may be enabled to change or improve their practice in a very short time with wonderfully helpful results. If there are those who doubt the correctness of this statement, permit me to say that the remarkable thing about nature is the fact that most of the things which have proven stumbling blocks to the progress of the human race are found upon their solution to be very simple, and the principles upon which most discoveries of great importance rest are comparatively easy to interpret and apply in a practical manner for the benefit of the human race. On this account an agricultural college can through an adequately organized extension division exert a remarkable uplifting influence on the development and general advancement of the agriculture of a given commonwealth.

Appreciating the three-fold nature of the work of such an institution every effort has been made, in accordance with your advice and instructions, to keep the three lines of work in proper relation and equilibrium. Two phases of the work have already been reported upon, hence what has been undertaken or accomplished along research lines by the several divisions of the College is presented in the following paragraphs.

### Division of Agronomy.

The production of cotton under boll weevil conditions is one of the most serious problems which our farmers now face. To aid in the solution of this question every effort has been made to develop strains of cotton which set on fruit rapidly, mature a considerable part of it relatively early in the season, and continue to fruit and grow until frost. Investigations show this type of cotton to be best adapted for growth under boll weevil conditions. As a result of the effort put forth, College No. 1 has been developed and widely distributed. This is not only a high-yielding strain as far as lint is concerned, but the seed run unusually high in oil, which has now come to be regarded as one of our most important and desirable food assets.

It has been evident for a long time that a great many so-called varieties of cotton are being cultivated in the state which do not possess any special merit and which can not be grown successfully after the boll weevil invasion. Through funds appropriated by the Georgia Cotton Seed Crushers' Association a seed survey of the state was undertaken last fall. The object of the work was to ascertain the name and the extent to which leading varieties of cotton were grown, the amount of desirable planting seed available, and to secure samples of different varieties in order that a study might be made of their nitrogen and oil content. From the data obtained it has been possible to prepare a preliminary seed map of the state, which shows that only a comparatively few varieties are widely cultivated. The most extensively cultivated strain of all is Cleveland's Big Boll which is grown chiefly north of the fall line. The second most widely distributed variety is Covington-Toole, grown largely south of the fall line, and in that section where the wilt disease has proven most destructive to cotton. Its cultivation in this area is not surprising as it is apparently the most strongly resistant strain to this disease known at the present time. Other varieties more or less extensively grown are Poulnot, Half-and-Half, Sunbeam, Broadwell's, Lankford's and Simpkin's. This survey has brought to light many important facts, and has enabled us to make a distinct advance in the matter of standardizing varieties of cotton. The information now in hand enables us to advise farmers rather definitely with reference to the merits of leading strains of cotton. Georgia is the only state in which an investigation of this character has been undertaken. It will be a misfortune if we are forced through lack of funds to discontinue it.

The experiments begun several years ago for the purpose of determining the relative nitrogen and oil content of cotton seed have been continued. A report on the oil investigations has been prepared and distributed in bulletin form. The oil content varies greatly, the difference between Rexall and Trice in 1914 amounting to 16.5 gallons of oil per ton of seed. At present prices for oil,

the seed of Rexall would be worth \$19.00 per ton more than those of Trice. Tests carried on now for three years indicate that the seed of strains running high in oil breed true from year to year, which leads us to believe that the oil content of seed is an inherent characteristic of the variety and may be increased by plant breeding and judicious selection.

The summary of the results obtained to date show that in 1914, seven strains contained more than 21.5 per cent of oil and eight strains less than 20.5 per cent. In 1915, nine strains contained more than 21.5 per cent of oil, and seven strains less than 20.5 per cent. In 1916, five strains contained more than 21.5 per cent of oil and eight strains contained less than 20.5 per cent. These varieties were grown at Athens under similar conditions as to soil management. The same relative differences were observed in the case of a large number of varieties grown in other sections of the state and shipped into the College for the purpose of having the oil content determined. The wide variation in the moisture and oil content of seed has led the Bureau of Markets of the U. S. Department of Agriculture to the conclusion that some sort of a standard for selling them should be established in the interest of the grower and manufacturer. According to our investigations it would appear that this standard should be based on the oil content. The following table is suggested as a basis on which to determine the market value of cotton seed:

Grade	Minimum Oil Percentage	Maximum Percentage of Damaged Seed
Fancy	23.0	1
1	21.5	3
2	20.5	6
3	19.5	12
4	18.5	20

No. 1 should be regarded as standard seed and should constitute the basis for all buying operations. Seed containing more than 21.5 per cent of oil would be classed as fancy and command a premium, and those containing less than 21.5 per cent would be sold at a corresponding discount from the price of standard seed. If such a plan of handling seed were established, growers of inferior strains would discard them in favor of the superior ones, and plant breeders would set to work to increase the oil content of some of our already well-standardized varieties. There would then be some incentive for the farmer to produce choice seed, and I believe if this practice were instituted and followed for a few years that the oil content of cotton seed would be increased by five to ten gallons per ton. This would add to the value of the cotton crop quite materially, provide a large amount of the oily fats so essential for the economic, wise and satisfactory rationing of our people, and eliminate from cultivation a lot of so-called varieties of cotton which possess but little merit and are frequently grown at a disadvantage.



According to our observations seed should not contain normally more than ten per cent of moisture. When they do their keeping qualities are impaired. It has been suggested that the standard for purchasing seed be established solely on the moisture content. Our investigations show that in this event strains running high in oil would almost certainly be discriminated against with the result that the percentage of oil in our cotton seed would stand still or possibly decline. This would be a misfortune for all the interests concerned. Even if seed were purchased on the moisture basis it would be necessary to send them to a chemist to determine the percentage they contained. Hence, it would be just as easy to ascertain the percentage of oil as of moisture. Our investigations indicate that the percentage of oil must be considered as a dominant factor in standardizing cotton seed. If this be done, it appears that the oil content of the seed purchased in the south could be easily increased by fifty million gallons in the course of ten years. Why not capitalize this latent source of wealth?

Twenty bushels of an improved strain of seed corn were distributed this spring by the division of agronomy. Observations indicate that the small stalk is the one that usually gives the largest yield of corn, and also the best quality of stover. In view of the general interest in live stock, the question of pasture conditions in the state has been given a good deal of consideration. A grass map of the state is being made as rapidly as possible and some most valuable information has already been obtained. It appears, for instance, that carpet grass, *Axonopus compressus*, promises to be a most valuable asset to the farmers of south Georgia. Neither its value nor its presence in that section seem to have been appreciated until pointed out to farmers by representatives of this division. Systematic effort is being made to collect and arrange data regarding diseases of crops. This work is being carried on in coöperation with the U. S. Department of Agriculture.

A most important observation brought to light through the results of the cereal investigations during the past year is the fact that early seedings of oats in many instances escaped the freeze. It seems clear that if this crop were planted in north Georgia about October 15th, and in south Georgia about November 15th, the yield would, as a rule, show an average increase of twenty bushels per acre. Farm management surveys have been carried on during the year in parts of Sumter and Brooks county in coöperation with the Bureau of Farm Management of the U. S. Department of Agriculture. The surveys made to date indicate that on the light lands in Brooks county farmers who had from 25 to 30 per cent of their land in cotton made the largest income. In Sumter county previous to the advent of the boll weevil farmers who had 50 to 60 per cent of their land in cotton secured the largest income. The Brooks county survey indicates that the cost of hog production in

that county is around five cents a pound. It appears that the average labor income on Georgia farms is approximately \$446.00. This is much below what it should be and the state cannot become permanently prosperous until this condition is changed. The subject of farm bookkeeping has been neglected. Until farmers and communities are induced to establish some system of records on the basis of the plans formulated by our farm management workers, it will be a slow and laborious task to place our farming operations on a sound economic basis.

### **Division of Animal Husbandry.**

Certain new crops are commanding the attention of Georgia farmers, such as the velvet bean and the peanut. It is important, therefore, that their feeding value for certain classes of farm stock be determined as soon as practicable. To this end an experiment was instituted in the fall with twelve cows which were divided into four groups and fed for ninety days on the following rations: Group 1, silage 36 pounds, sorghum and peavine hay 7 pounds and cotton seed meal 6 pounds. Group 2, silage 36 pounds, sorghum and peavine hay 7 pounds and velvet bean meal 6 pounds. Group 3, silage 36 pounds, sorghum and peavine hay 7 pounds, peanut meal 7.6 pounds. The results indicate that when cotton seed meal sells for \$35.00, peanut meal \$35.00, velvet bean meal \$25.00, hay \$14.00, and silage \$3.00 a ton respectively, that the profit on milk at thirty cents a gallon was \$181.59 with group 1, \$165.23 with group 2, and \$172.21 with group 3. The profit on the butter at thirty-five cents a pound was \$33.66 with group 1, \$34.58 with group 2, and \$23.94 with group 3. These figures seem to indicate that cottonseed meal must still be regarded as the primary concentrate for the production of milk and butter. Velvet bean meal, according to this test, appears to have proven more valuable for butter than for milk production. All of these concentrates were fed to advantage and could be used with profit on the average Georgia farm. The addition of velvet bean and peanut meal to our other concentrates high in protein is a distinct advantage to the animal industries of the state. What we need now is to increase the supply of corn and other cereals to the point where we can utilize these high protein concentrates for the purpose of supplying the deficiency in this element, notably in the case of corn. When this is done, and systematic efforts are being made towards that end, Georgia will be in position to feed beef and dairy cattle and other classes of live stock with a high degree of economy and efficiency on home-grown rations.

On the basis of the foregoing figures, one pound of cottonseed meal fed in association with the foodstuffs mentioned above produced 3.5 pounds of milk; one ton of the meal, 7003.4 pounds of milk. One pound of velvet bean meal fed under similar conditions

produced 3.4 pounds of milk; one ton of the meal, 6881.4 pounds of milk. One pound of peanut meal fed with the foodstuffs used produced 2.9 pounds of milk; one ton of the meal, 5718 pounds of milk. Deductions based on these figures leads to the conclusion that one ton of cottonseed meal is equal in feeding value for dairy cows to 2035.4 pounds of velvet bean meal, and to 2449.6 pounds of peanut meal. Records have been kept of the entire dairy herd on which the facts presented elsewhere in this report are based. These records have enabled the division not only to improve the character of the herd but to provide the definite information needed for the instruction of students in the principles of animal breeding and feeding, and for the use of our extension workers. Other lines of experimental work being carried on by this division in the interest of pasture improvement, swine production, crops suitable for silage, livestock extension, together with the work accomplished during the year, have been reported on in considerable detail elsewhere. Hence, their repetition at this point is unnecessary.

### Horticultural Division.

The horticultural division has continued its fertilizer studies with apples and hopes to be able to issue a report on this subject next fall. Efforts are being made to extend the investigations with apples into Fannin, Gilmore and Pickens counties. The cantaloupe work has been continued in south Georgia, and it has been demonstrated to the satisfaction of the growers in the southern part of the state that by spraying with Bordeaux mixture the picking season may be lengthened from one to two weeks, thereby insuring the gathering of a larger crop from the vines. Coöperative arrangements have been made with the Bureau of Plant Industry for the prosecution of studies looking to the control of anthracnose and stem-end rot in watermelons. Considerable attention has been given to the sweet potato crop, emphasis being laid, first, on methods of marketing, and second, on storing. A circular on the handling of the sweet potato crop has been issued, and in coöperation with the agricultural engineering division, a poster has been prepared and distributed giving plans and directions for the construction of potato storage houses. In response to the request of the peach growers of Fort Valley, an investigation was made which shows that the fungus, *Valsa leucostoma*, was the cause of the death of many trees. It was believed for many years that this fungus was only semi-parasitic, but recent reports seem to indicate that it is doing serious damage in many parts of the United States. The division has been in position to advise the growers as to the control of this fungus and its elimination. A little work has been done on sugar beets with the idea of determining their value for sugar production in this section of the south. Demonstrations with Irish potatoes have been carried on at twenty-eight



points in Georgia during the past year. This work was organized with the idea of encouraging the growth of fall crop potatoes in north Georgia where there is a sufficient area of land to raise all that the state needs. We are only producing about one million bushels of potatoes, whereas, we consume about eighteen times that amount. Demonstrations were conducted on 1335 acres of sweet potatoes, the average yield being about 149 bushels per acre. About 6000 acres of sweet potatoes were planted and cultivated according to an advanced practice through the influence of the work of this division in 1916.

Demonstrations and observations are being carried on in 731 apple orchards and 214 peach orchards. There were approximately 60,000 trees in these orchards. There were 1500 orchards, containing 276,638 trees, inspected for diseases and insects; 800 orchards containing 63,000 trees pruned. 638 orchards, containing 53,000 trees sprayed; 1300 fruit trees were wormed; and 385 orchards, containing approximately 100,000 trees were planted through the advice of the extension specialists of this division. As a result of the efficiency of this work, one home orchard in Richmond county, which had never produced anything, furnished not only the fruit needed for the home, but \$60.00 from the sale of the surplus fruit. Some 306 barrel sprayers were purchased and used last year as a result of the efforts of the men in this division. The planting of home gardens has been systematically encouraged. Two overhead irrigating systems have been installed, and the grounds around 1605 homes beautified as a result of the advice and directions given by experts of this division.

#### **Division of Agricultural Engineering.**

The division of agricultural engineering prepared and traced twenty-seven new designs for farm structures, and sent out 1674 blue prints. It is interesting to note that plans were sent to nearly every county in the state, the demand for aid in this direction being more emphatic in south Georgia than elsewhere. In some instances as high as fourteen blue prints were sent to a single county. Since these were all distributed either by individual request or through the county agent, it shows what a wonderful interest is developing in the erection of a modern, up-to-date type of farm structure throughout the state. When you consider the inadequacy of many of those which have previously been erected you can glimpse some idea of the importance and value of the service work which is being rendered by this division. Plans have been sent out for 112 silos, 17 dipping vats, six water works systems, seven home-lighting systems, 2,742 blue prints and posters detailing the construction of sweet potato houses, 594 other farm buildings. Designs and specifications have thus been furnished for \$1,409,200.00 worth of farm structures. It will thus be seen that there is a general interest in the erection of all types of buildings needed on the average Geor-



gia farm. It is apparent that one field agent cannot prepare the necessary designs and blue prints and do the traveling incident to giving first-hand advice and information to those wishing to erect buildings of the several types enumerated. Provision for the appointment of an additional man should be made as soon as practicable.

The division of agricultural engineering has not as yet had opportunity or funds with which to organize and carry on many lines of research work, but it has been successful in accumulating a good equipment of farm tools and implements with which experiments are now being instituted. There are many problems which this division hopes to attack vigorously at an early date, such as the draft and efficiency of plows, and the effect of silage juices and impurities in sand on the strength of concrete. Already a good deal of valuable data with reference to the use of the gas tractor in Georgia has been gathered and put into form which will enable the division to give accurate and essential information to those desiring advice with reference to the purchase of machinery of this character.

A farm machinery dealers' short course was organized last January. There were ninety-three persons in attendance. This course was the first one of its kind ever offered. The object was to impress both the farmer and the farm machinery dealer with the necessity of working together for mutual benefit since their interests are so nearly identical.

#### Division of Agricultural Chemistry.

This division has continued its chemical soil studies and is constantly bringing to light some new fact of fundamental importance with reference to this problem. The work accomplished on the physical surveys has been reported on under the head of coöperative relationships, so that further reference to it will not be made at this time. Laboratory investigations are of necessity slow and laborious. Already 264 types of soil have been mapped, 741 samples analyzed and 8892 separate determinations made. The work has progressed sufficiently to give a fair idea of the composition of the different important soil types in the state and to suggest various problems for reasearch work. The study of the chemical analyses of certain soils and the results obtained on the test plats make it evident that the mineral composition of the soil separates has a great deal to do with the solubility of the mineral plant food constituents. The important and essential nature of this conclusion is self-evident, and therefore some studies relative to this matter have been inaugurated. The laboratory force is not such as to permit one or more men being set aside to conduct investigations of this character. Thus the work must be made rather an incident to the analysis of soils from the large number of the counties in which physical surveys have already been completed.

At the same time some progress is being made along the line suggested. What has been accomplished to date may be summarized as follows: special studies have been inaugurated to determine the comparative degree of availability of the plant food in some of the predominant and important soil types of the different sections of the state. The preliminary work accomplished shows a wide difference in the relative per cent of soluble potash and phosphoric acid in soils of the different sections of the state. The analysis of many samples from the Piedmont area reveal that the sandy loams are uniformly higher in potash than the clays and clay loam types, and also that the per cent of potash is always higher in the top soil than in the subsoil. Strange to say, this is contrary to the general and accepted teaching on the subject, hence it has been thought worth while to make a chemical study of the different soil constituents. This is but one of a number of interesting and fundamental propositions which have come to light as a result of the chemical studies of Georgia soils which are now being made. It is easy to understand that it is necessary to determine facts of this kind in order that we may know how to handle and fertilize our several soil areas intelligently. This division has coöperated with the U. S. Bureau of Soils in making such special analyses as were necessary to insure the proper classification of soils of doubtful type.

#### Division of Veterinary Science.

The manufacture of hog cholera serum was continued during the year. The amount distributed has been reported on elsewhere. This work has been carried on in the face of considerable difficulties due to the excessive price which hogs and feedstuffs command and the changes in the personnel of the division. Sufficient serum was sent out to treat 40,000 hogs with an average dose of 20 c. c. Considerable work has been done along the line of controlling cholera in chickens. An outbreak of this disease occurred among the fowls of the College poultry plant. Vaccine was prepared by the officers of this division and 800 chickens inoculated as a preventive measure with most excellent results. The cost was very low, and hence, plans are now being considered by which it is hoped to perfect the manufacture of fowl cholera vaccine on a basis which will enable poultry raisers throughout the state to secure it at a small cost. An endeavor will be made to produce similar vaccine for the prevention of roup and sore head. The poultry industry of the state is quite large and growing rapidly, and if the plans contemplated can be carried into effect, the division should be able to lessen the serious loss occasioned by the rapid spread of such infectious and contagious diseases. Work of this character may therefore be regarded as of great economic value to the state.

While the establishment of the four-year course leading to the

degree of D. V. M. would not properly be regarded as a research enterprise, it is one of the most important developments which has occurred within this division since its establishment. The first two years of the course are now offered. Eight men completed the freshman work and one the Sophomore work this year. It is believed that there will be a decided increase in the number of students taking this work another year, and it is essential for the protection of the live stock industry of Georgia that young men be encouraged to complete the veterinary degree course as soon as possible. The demand for graduate veterinarians is rapidly increasing in all parts of the south. At the present time Georgia is dependent for her supply of men of this character on other sections of the country. The occurrence of war has brought about a condition which will greatly increase the demand for veterinarians, and as the supply was below the demand even in normal times, the openings in this field are of a most attractive nature. Considerable additions to the equipment for student instruction and to the hospital building have been installed during the year. A good clinic is being developed, over 175 cases being handled during the school year.

#### **Division of Forestry.**

The division of forestry continued the plantings begun last year. The hillside south of the engineering building has been by your authority turned over to this division. It has been thinned out and cleaned up to advantage, and some six acres of the ten available planted this spring. A considerable number of the trees were secured from the U. S. Department of Agriculture, others being purchased from various nurseries. At present some sixty indigenous and nearly eighty exotic specimens are represented in the arboretum. As rapidly as possible this area will be developed into a park which should add greatly to the general beauty of our grounds, and at the same time prove a source of instruction and inspiration to our students and citizens generally. The land in this area is admirably suited to the growth of trees, but is of little value for agricultural purposes, and it is intended that this area shall be used to establish what can be done with much land of a similar nature in Georgia, which by reason of neglect is now being washed and eroded at an alarming rate. The forest nursery has been extended considerably during the year and a large amount of new stock set out. During the winter many cuttings were made from stock purchased last year and thousands of seedlings have been set out on the College farm. All the seed beds previously built were replanted this spring. The willow holt has yielded a nice bunch of rods, a part of which were peeled by students in practicums for use in the Summer School. The cresosoting plant has been operated in connection with the course in farm forestry. Valuable additions have been made to the museum, and as a result



this division is now in position to offer a course in wood utilization with special reference to the agricultural aspect of forestry.

### Special Meetings.

With the funds made available under the farmers' institute appropriation, 96 meetings were held in as many counties of the state during the summer of 1916. This was the best series of institute meetings which has ever been held, the attendance being 17,829. No doubt you remember the excessive precipitation which occurred in July when many of these meetings were in progress. On account of floods there were a few instances where the meetings could not be held. The work done at this series of meetings was especially valuable because of the destruction of many crops by overflow. It just so happened that the meetings were held at the psychological moment, thereby enabling the institution to place in the hands of farmers much valuable information concerning what to plant to replace the crops destroyed by the flood.

Educational exhibits were made at the State Fair at Macon, and at the Southeastern Fair in Atlanta. These exhibits deservedly attracted a good deal of attention. An effort was made through these displays to show the relation of educational work to the development of the agriculture of the state. Graphic exhibits were used for this purpose. For instance, a model of the College farm and the buildings thereon was shown so that visitors could grasp at once something of the nature and extent of the work which is being conducted. The exhibit made at Macon completely filled a special building and was by far the most varied, instructive and valuable exhibit the College has ever made. Fully 100,000 people viewed these exhibits and were both instructed and edified thereby. Live stock exhibits were also made at the fairs held at Winder, Cartersville and Rome. Motion picture displays were made at 83 points, 22,000 people attending the same. The pictures were shown in rather remote rural districts which are not very accessible from the railroad and which can only be reached satisfactorily in the manner indicated. The value of the service rendered in this direction is difficult to estimate because in many instances this was the first time the people reached had ever seen a motion picture or come in contact with the workers from the College. It is needless to say that they were interested, impressed and gratified to feel that the state had neither forgotten nor overlooked them but was just as anxious to serve and advance their interests as those living in the more populous centers and near the railroad. That this campaign has been productive of great good is evidenced by the large correspondence which has come to the institution based entirely on the result of the motion picture tour. It is another evidence of the fact that the people are in a receptive frame of mind, and that they are anxious to learn of the privileges and opportuni-



ties which the state may afford them and their children. Of course, there may be some conscientious objectors but they are in the district minority. People in the remoter sections of the state are anxious to be recognized and helped. They are entitled to this consideration on the part of the institution. The motion picture as a disseminator of agricultural knowledge has thus established its status and will constitute an increasingly important phase of our extension teaching work.

### **Boll Weevil Campaign.**

As you no doubt know, the U. S. Department of Agriculture is spending through the agency of our extension division some \$53,-300.00 of indirect congressional appropriations for the purpose of aiding in the fight against the boll weevil which recently invaded Georgia. The most persistent and elaborate investigation of the nature and habits of this insect fully demonstrates that the only way of fighting it successfully is through the diversification of crops, the lessening of the acreage in cotton and the emphasis of live stock production. It has been traveling across the country for over two decades, and in spite of lavish expenditures on the part of the government and the states no direct means of checking its spread has ever been found. In the states infected many years ago a readjustment of their agricultural practice has enabled the farmers to meet the onslaught of this pest successfully and at the same time enjoy a high degree of prosperity. In view of the necessity of teaching our southern farmers how to change their agricultural practice, Congress set aside a special fund for the U. S. Department of Agriculture to use for this purpose and advised that the states benefitting by this fund should offset it on the half-and-half basis. Georgia's share for 1916-1917 is the amount indicated above. It must be spent in coöperation with the extension division of the Land Grant Colleges for the purpose of aiding in the maintenance of county agents. In this way it was possible to advise farmers before the weevil came as to the changed practice which its advent would render necessary and to point out to them how to grow cotton under boll weevil infestation. Information was also given as to the crops which might be used as substitutes for cotton, and the nature and variety of food crops which should be grown to feed and maintain live stock economically. Georgia was fortunate in having this appropriation at her command several years before the advent of the weevil and the county agents and all the College staff as a whole have worked assiduously to give the people the necessary information. As a result, the farmers of this state were better informed and prepared for the advent of the weevil than those of any other state which it had previously invaded. At least this is the statement made by federal officials who have had many years of experience in dealing with this pest and ought to be in a position to know the facts in the case.

The question of fighting the weevil and holding its ravages in check, therefore, is purely an agricultural problem, depending on the selection of an early-maturing variety of cotton, the proper cultivation and fertilization of the land, and the introduction of a wise and judicious system of diversified crop and animal production. To this end the government endowed the state colleges of agriculture through the agency of the Smith-Lever Act, thereby enabling them to place in the field county agricultural agents to act in the capacity of "first aids" and resident advisers to the farmers. What the agents have accomplished in this direction need not be presented in detail because of your general familiarity with the subject, but it is not claiming too much to say that whatever has been done of essential worth has been accomplished chiefly through their activities. They have done much to induce business men to aid in the fight against the weevil by changing the basis of credit, encouraging live stock production, establishing mills and warehouses for the handling of such crops as peanuts, velvet beans and soy beans. Since, therefore, the work of the extension division was created and established in order that it might become a permanent factor in aiding the fight against the weevil, and in view of the special fund assigned to Georgia for this work, it is self evident that it has been the duty of the agents and our staff for some years to conduct and prosecute with the utmost vigor a campaign of education calculated to inform our farmers about the boll weevil and how to fight it most successfully. There are those who have claimed that this particular field belonged to them, but in this they are distinctly in error, for if the College had acted otherwise it would have broken the law, failed to carry out its solemn agreement with the U. S. Department of Agriculture, and militated seriously against the efficient use of the appropriations received from federal sources, thereby endangering their loss to the state.

It is clear to all who have given this matter any consideration that the fight against the weevil is strictly an educational propaganda, and in view of the terms and provisions of the Smith-Lever Act. the College of Agriculture and its agents and field workers generally are acting within their rights in organizing, aiding and promoting in every possible and practical way the dissemination of knowledge among the people calculated to prepare them for the boll weevil invasion and mitigate its damages after it has come. Such being the case, by direction of the Board of Trustees and in view of the serious menace which Georgia faces from this pest, a "hog and hominy" or "better farming" campaign was inaugurated last fall and winter, having for its object the information of the farmers with reference to the weevil. Five teams of two to three men were sent into ninety-seven counties. They reached by actual count 34,794 people. At these meetings a full and frank discussion of the problems to be met and solved was undertaken. The meet-

ings were not held at courthouses but in the rural districts, chiefly in country school houses, from four to six meetings being held in each county visited. By this arrangement it was possible to reach the people who needed the information. In addition a number of bulletins, circulars and posters have been prepared and distributed in large editions to our mailing list and through the county agents. This literature has been favorably commented on and is in great demand both in Georgia and other southern states.

### **The Food Crisis.**

You are familiar with the food crisis by which the country is now confronted and the urgent demand made upon the people of the south to feed themselves. From the very beginning the trustees and the officials of this institution have been alive to the gravity of the situation, and a persistent and enthusiastic effort has been made to discharge the duty and obligation resting upon us in this respect in an acceptable manner. Long before a food council had been advised or suggested for the state, the agents had been called together and instructed to urge upon the farmers in every possible way the importance of food production. As soon as this matter was taken up by the State Defense Council, instituted through the efforts of the Atlanta Chamber of Commerce, the College officials were called into consultation and asked to devise a plan of action and organization. This was done and it was immediately put into effect, not only in Georgia but throughout the south. A number of bulletins and posters were in the mean time prepared and distributed as widely as possible. One of these bulletins dealt with "When and What to Plant Under Present Conditions," and another on "Solving the Food Problem." A circular and poster were prepared on garden crops, and these have been followed up by circulars on cowpeas, soy beans, velvet beans, peanuts, corn, sweet potatoes, Irish potatoes, vegetable gardening, the canning of fruits and vegetables, the economic maintenance of the family, the drying and preserving of food, and how to organize.

In coöperation with the Athens Chamber of Commerce, an organization was formed in Clarke county to illustrate how through the holding of meetings on Sunday at the various churches and school houses, practically every one in the city and country could be informed with reference to the food crisis and how to meet the same. This plan proved to be so effective that when placed in the hands of the agents it spread rapidly throughout the state and was taken up by other agencies and made the basis of the organization followed in many of the southern states. About this time the Secretary of Agriculture called a conference of agricultural workers at St. Louis and advised the inauguration of a State Food Council in each state. Governor Harris appointed such a council in Georgia of which I am a member. When this council was called



the plans originated at the College were accepted as the official plans of the organization. A state meeting was called at Macon which some 2000 delegates attended and the writer was asked to outline a food production policy for the state. This was done, and the address delivered on that occasion on "Meeting the Food Crisis" was printed and widely distributed by the Southern Bell Telephone Company, of Atlanta. An organization, based on the plan formulated and distributed by the College, has been effected in most counties where there are agents. As a result, the business men and bankers of the state have been aroused and they are now actively engaged in establishing mills for the grinding of various grains, the erection of warehouses for the assorting, grading, preserving and marketing of food crops, and the development of local canning enterprises that surplus perishable foods may be preserved. Plans have been formulated for building local abattoirs, cold storage plants, and small refrigeration plants in order that the meat supply may be properly conserved. Plans have been prepared and distributed for hundreds of sweet potato storage warehouses which will be erected by individual farmers or by communities so that one of the state's most important and easily expanded food crops may be raised not only in adequate quantity, but preserved throughout the year in first-class condition.

Reports received from the agents indicate that the primary difficulty they are now experiencing is to secure a sufficient supply of cans. To meet this situation the drying of food is being advocated and its preservation in glass jars in place of tin cans emphasized. It is probably true that cans can be secured in considerable quantity, but the price now asked for them is excessive. It seems wise, however, to advise people to preserve the food rather than allow it to waste even if the cans do prove costly. Of course glass and all other types of containers should be used as far as practicable. In this connection the College authorities have been assiduously active through Chambers of Commerce, bankers, business men and the U. S. Department of Agriculture in an endeavor to mitigate the can situation. Every resource at our command has been exhausted. Our efforts will be continued throughout the canning season. A survey of the state through the county agents indicates that there is every reason to anticipate, if the season is at all favorable, an increase of at least twenty-five per cent in food crops, and a very considerable increase in the meat supply as well. Under the circumstances it seems reasonable to conclude that the College has rendered a most important and essential service, and is performing the part devolving upon it in the national preparedness campaign as effectively as possible with the funds and force at its command. The officials of the U. S. Department of Agriculture at Washington are loud in their praises of what has been accomplished in Georgia, and credit us officially with having organized this state more efficiently than has been done elsewhere.



### Serum Production.

By your direction the serum plant has been operated as advantageously as possible during the past year. Some 895,950 c. c's. of serum were manufactured. This represents a considerable increase in production over the previous year. For over nine months serum was sold at .85 of a cent a c. c. Since that time at the request of the state veterinarian, the price has been raised to one cent a c. c. When you consider that the price of concentrates and other supplies used in serum manufacture has practically doubled in the last few months, it is remarkable that we have been able to break up to the present time and sell serum at a cost of one cent. As a matter of fact, Georgia farmers are being supplied through this institution with the best grade of serum at a lower cost than it can be obtained in any other southern state. That the serum is of satisfactory quality is shown by the fact that none of it has been returned. You are familiar with the efforts which this Board has made to increase the output of serum from the College laboratories. You have advised that we try to learn the amount which the state veterinarian could use, but we have never been able to obtain this information. The plant is still being operated, therefore, on the "hit and miss" basis. There were times during the year when there has been due us from the state veterinarian between \$1300.00 and \$1400.00 for serum furnished. As the plant is operated without an appropriation and must of necessity be self-sustaining, you will see that this situation has proven embarrassing to us in a financial way. It would not be a difficult matter to make a larger quantity of serum had we any assurance that it would be taken off our hands at a reasonable price. By maintaining the plant here we could guarantee the quality of the serum the farmer receives and test that sent into the state by commercial concerns. The advantage of doing this is apparent in view of the large number of complaints coming to our attention with reference to the bad quality of commercial serum. The farmers are entitled to this protection just as much as that afforded them through having their fertilizers and foodstuffs analyzed. The College has the plant and facilities to do this work satisfactorily if a small appropriation were made available for maintenance. We are working the equipment and facilities at our command efficiently and satisfactorily. It would cost very little to add materially to the size of our plant and so insure the production of a great deal more serum than is now manufactured. Fifteen thousand dollars a year would probably enable us to enlarge the plant, maintain adequate courses in veterinary science, utilize the professors employed for teaching to aid in the manufacture of serum, and enable us to supply all the demands of the state for serum.

It is manifestly absurd that an institution charged with the manufacture of serum should not be permitted to distribute the

same. In so far as I know, Georgia is the one exception in the United States in this particular. As we now operate, there is much delay in getting serum into the hands of the people who need it. It can be shipped directly from Athens just as well as from Atlanta and at a saving in cost as we are now paying the expressage to Atlanta. The people in many counties look to the county agent to aid them in securing a satisfactory supply of serum, but they seem to experience much difficulty in obtaining the same. The agents last year injected something like 142,860 head of hogs with preventive serum. You can easily imagine how the prompt use of this serum prevented the rapid spread of cholera and what an enormous saving was effected to the state by the agents in this direction alone. If the College is required to manufacture the serum and the agents are permitted to inject it, there is no reason why we should not be permitted to send it directly to them. This will not advantage the institution, but it will materially help and benefit the farmers of Georgia whom we are expected to serve as effectively as possible. Our agents constantly complain of their inability to secure College serum. This has happened in many instances right after we have made a large shipment to the state veterinarian. It has also occurred when we have had considerable supplies of serum on hand at Athens for which no apparent demand existed. These facts are called to your attention for your information and for such action as you may deem it wise and advisable to take under the circumstances.

### **The Executive Office.**

The work of this office has received my active personal supervision and attention. It is needless to point out to you that the duties grow more onerous as the years go by. It is self-evident that this must be the case on account of the rapid growth of the institution and the large number of new lines of work which are constantly being projected and organized. Ten years ago there were seven persons employed and we did not have one well-organized department. There are now ten divisions in the institution employing from three to ten men, or a larger staff in many instances than the College started with ten years ago. The administrative, technical and extension staff with headquarters at Athens now numbers seventy-one. The district and county agricultural agents now number 110 and the home economics agents 56, making a total of 237 employees of the institution. In ten years there has been an increase of 230 in the personnel. This is indeed a remarkable growth and I believe far exceeds the most sanguine anticipations of any one associated with the College when its reorganization was undertaken. It is important to remember that the members of the staff are reaching into every county in Georgia and that they come into direct contact with 423,755 people in the course of the year.

This figure will not appear so large when you recall that the staff conducted more than 4,858 meetings during the College year. You no doubt realize the difficulties incident to the handling of so large a body of people. It is certainly gratifying that such a large number of field workers should up to the present time have met so many people and discharged the duties of their position so successfully with such a small amount of friction or misunderstanding as has characterized the work of our staff.

The funds received by the treasurer total \$253,799.95. The direct and indirect expenditures from federal and local sources amount to \$187,712.00. The institution is, therefore, supervising the gross expenditure of \$441,511.95 annually. The income of the College for maintenance in 1907 was less than \$30,000.00. Our present resources are over fourteen times greater. You will recall that in addition to meeting the offsets under the Smith-Lever Act, it has been necessary to raise \$80,000.00 to meet the indirect appropriations which Congress has made available for the furtherance of various lines of research and extension work. The work under the Smith-Lever Act organized on the project basis has gone forward in a harmonious manner. It will fortunately not be necessary to change many of the projects very materially next year. There are seventeen projects in force at the present time.

The College accounts have been examined by the state auditor, and the Smith-Lever accounts by two auditors sent from the U. S. Department of Agriculture. We have thus had a double audit of the greater part of the funds received and expended. I am happy to report that Mr. T. W. Reed, our treasurer, has kept his books in such a satisfactory and efficient manner as to win the commendation and approval of the various auditors who have examined the same. In so far as I know, no exception has been taken to any item of expenditure chargeable to any of our accounts. This it seems to me is a showing of which the trustees naturally have reason to feel proud.

In spite of the ever-increasing burden of office duties, a considerable amount of time has been spent this year traveling over the state to address the people especially on the subject of food production. Addresses have been delivered on various phases of the food situation in Atlanta, Macon, Savannah, Dublin, Albany, Augusta, Americus, Athens, Gainesville, Monroe and Commerce, with a total attendance of approximately 15,000. Special papers were prepared and addresses therein delivered before the American Meat Packers' Association in Cincinnati, on "The South as an Important Factor in Increasing Our Meat Supply;" before the American Association of Agricultural Colleges and Experiment Stations in Washington, D. C., on "Organization and Administration under the Smith-Lever Act as Related to Home Economics Departments and the Farm Home;" before the Southeastern Land Show in At-



lanta on "Determining Factors in Crop Production;" before the Federal Nitrate Commission in Atlanta on "Nitrogen as a Factor in Southern Agriculture;" before the Southern Cattlemen's Association in Atlanta on "A Survey of the Live Stock Situation;" before the Food Conference in Macon on "The Emergency We Face;" before the Georgia Dairy and Live Stock Association on "Georgia as a Live Stock State;" before the State Horticultural Society on "The Horticultural Centers of Georgia;" and before the Georgia Drainage Association on "What Drainage Will Do For Georgia." I have also spoken before the student body of the State Normal School and the University of Georgia and to the scholarship winners at the State Fair and the Southeastern Fair. A series of lectures was delivered before the county agents at their meeting in January on problems affecting their work.

The executive office is called on to carry on a large amount of correspondence. Some idea of its rapid growth and development may be better obtained when I say that it takes the services of three expert stenographers to do the work. I believe I do not exaggerate when I say that the leaders of business, industry and agriculture in the state look more confidently to this institution for aid and advice in the solution of their problems than ever before. A consistent effort is being made to meet these demands as effectively as possible.

#### Student Interests.

Our student body is worthy of special commendation. They have done excellent work during the year and have conducted themselves with dignity on all occasions. They have displayed an interest in their work equally gratifying to the administrative office and the instructors. As usual I have enjoyed their active and sympathetic coöperation in keeping the building and grounds in an attractive condition. The attitude which our students have displayed towards the public property is a matter which I can not pass over lightly. I feel that their action in preventing its defacement should be called specifically to your attention. Though most of our equipment has now been used over eight years, I believe you will find it presents a better appearance than much of the equipment of many school bulidings which has not been used more than a year.

The students have conducted the Agricultural Quarterly with success, and the high standard of the paper has been maintained. They have had a successful year financially. A capable staff has been elected for another year and unless war conditions interfere good work will no doubt be accomplished. The triangular inter-collegiate debate with the agricultural colleges of North Carolina and Alabama was not held this year. It seemed impossible to reach a satisfactory basis of agreement as to the subject for debate, and though our students were enthusiastic, their efforts were apparent-



ly not reciprocated. The Alpha Zeta has had a successful year. The alumni of the College now number 118. They have an association and have placed some of the most capable graduates in charge. The alumni have undertaken to gather the funds together for the erection of a club house for agricultural students. The funds in the bank for this purpose now amount to \$426.50, while \$3,065.00 has been subscribed. Mention has been made elsewhere of the action of the senior class in volunteering their services to go into the field to push food production. Most of them have done acceptable work and it will be proper therefore to recommend them for graduation.

### Inventory.

The inventory for 1917 has been prepared with as much care as possible, and is presented for your information:

Land, 830 acres-----	\$169,500.00
Main Building -----	135,000.00
Power house, including heating plant, light, water, plumbing, sewage, gas, sidewalks, etc-----	33,250.00
Houses on College property, including Lumpkin Hall---	9,000.00
Division of agronomy, including barns, houses and dem- onstration field equipment-----	15,973.49
Photographic room equipment-----	340.00
Division of forestry-----	4,383.45
Division of horticulture, including barns, grounds and other equipment -----	21,026.00
Extension equipment and exhibit cases-----	7,191.66
Division of agricultural chemistry, including soil lab- oratory -----	6,611.93
Library -----	6,375.14
Division of agricultural engineering, including labora- tory -----	36,308.58
Division of veterinary medicine, including hospital and serum plant -----	21,513.16
Division of poultry husbandry, including buildings----	14,021.30
Division of animal husbandry, including dairy-----	4,890.50
Live stock on farm-----	19,870.00
Farm buildings, barns and tenant houses-----	24,941.14
Tools and implements-----	2,981.10
Total-----	\$533,177.45

The total value of the property is approximately \$533,177.45, which represents an increase of \$16,223.78 over 1916. The usual deductions for depreciation have been made. The value of the buildings owned by the College is now well over \$200,000.00. The value of the land is \$169,500.00, an increase of \$2000.00, which is for land purchased during the year. The main building has been returned as in former years. The price of material and equipment is such now that the main building could not be replaced for the sum indicatde above, and if we were called on to install the power, heating, lighting, plumbing and gas plants as they now stand, it would cost us at least \$60,000.00. Additions to the laboratory equipment total \$6,972.85; to the general equipment, \$12,177.83. This includes gifts received by the several divisions and the in-

crement on the College herds. The equipment of the division of agronomy is worth \$15,973.49; of the division of horticulture, \$21,026.00; of the division of agricultural engineering, \$36,308.58; of the division of veterinary science, \$21,513.16; of the division of poultry husbandry, \$14,021.30; of the division of agricultural chemistry, \$6,611.93; of the division of animal husbandry, \$4,890.50; and of the division of forestry, \$4,383.45. The apparent decrease in the property of the latter division is due to its removal from Lumpkin Hall. The value of the buildings, live stock and implements on the College farm totals \$47,792.24, an increase of \$3,302.53 over last year. This statement does not include any credit for the enhancement of the property through the construction of roadways which have been built through the coöperative arrangement made between the trustees and the Commissioners of Roads and Revenues of Clarke County without incurring any monetary outlay. If constructed by contract these roads would have cost over \$10,000.00. The improvement of the farm for agricultural purposes since it was taken over approximates \$20,000.00. These figures indicate that the Board has assembled and now has under its direction property worth over \$530,000.00, practically all of which has been accumulated at a remarkably small cost to the state when the character of the buildings erected and the general layout of the property are taken into consideration.

### Needs of the College.

It seems unnecessary to point out that an institution which has grown so rapidly in all particulars and has received no addition to its maintenance funds for a period of six years is in a very unfavorable financial situation at the present time. The cost of everything used in and about the institution has materially increased. The outlay for coal for the ensuing year will be about \$3,000.00 in excess of 1916-1917. Twice as much was paid for the paper on which to conduct our correspondence as it previously cost. The price of chemicals has advanced from 100 to 200 per cent. These are but little illustrations of what has happened all along the line. Our fund for maintenance is not only fixed, but has stood so long at one figure that we are now face to face with a financial situation which can only be met by an increase in our funds. No doubt economy should be our motto at the present time, but the most rigid examination of our accounts, purchases and disbursements will reveal the fact that this institution has made a record in this direction of which it has reason to be proud. It is impossible, however, to stretch our income any further, and we can not make it cover our needs and requirements under existing conditions. There is no possible relief in sight due to a prospective fall in prices. If indications amount to anything, we will have our normal student enrollment next fall. As things now stand, our professors are overworked, underpaid, and it has not been possible to section

our classes because of insufficient funds to employ the necessary instructors.

The federal government is making what under any other conditions would have been termed excessive appropriations to the Department of Agriculture, and in turn is calling on this institution to take up and perform in the state certain lines of public service work for which we are expected to offset on the dollar-for-dollar basis. An increase of \$21,000.00 in round numbers is due the institution from state and federal sources under the Smith-Lever Act. The use of the Smith-Lever funds is hedged around and restricted so that it imposes severe burdens on the College maintenance funds to provide the necessary office room and other facilities which the institution is required to provide out of state funds. Of our total direct revenue of \$253,799.95, \$193,799.95 has to be expended for extension service work. It is manifestly impossible for the College to be everybody's financial burden bearer and carry the weight of the superstructure which has been erected on it any longer without an increase in maintenance funds. The time has come when we must add to our force of instructors and assistants and when we must establish research and extension work in agriculture, botany, bacteriology, economics, education, dairying and veterinary medicine.

A number of men took the second year of the veterinary degree course and they justly feel that provision should now be made for the work of the junior year. We can not do this without an addition to our income. Georgia has now about \$130,000,000.00 worth of live stock, and but little more than fifty veterinarians to try to take care of it. A great many of these are employed in state or federal work and are not permitted to practice. Our several laboratories need to be replenished and enlarged. Additional equipment is absolutely necessary. A most careful and conservative review of the situation shows that to meet the increased cost of maintenance will call for an addition of \$10,000.00 to our maintenance fund and \$10,000.00 will be required to establish and maintain the veterinary degree course, and \$10,000.00 to provide for the legitimate growth of the College. To offset the special projects which the federal government has asked us to undertake, \$20,000.00 will be necessary, making a total of \$50,000.00. This does not provide for an increase in our state extension work as distinct from the Smith-Lever or county agent work, yet there is a constant demand for increased service in the matter of soil surveys, the establishment of test plats, special work in animal husbandry, veterinary medicine, agricultural engineering, poultry husbandry and horticulture. We either must have the funds in question or permit the work of the institution to be seriously crippled and the state lose the funds which would otherwise be available from federal sources. It does not seem reasonable to suppose that this is a policy which would appeal to the people of Georgia.



In this connection, it is proper to state that the President of the United States, the Council on National Defense, and all other leaders of thought and industry recognize the essential nature of the work of institutions such as this and have emphasized the necessity for continuing and emphasizing instruction, research and extension teaching. There are hundreds of young men in Georgia between the ages of sixteen and twenty-one who are not subject to the selective draft, but who by entering College next fall and obtaining specialized training along the lines we are in position to stress can prepare themselves most acceptably for service in some capacity related to the war or the period which will immediately follow the close of the war. It seems needless to point out that a new economic, social and industrial epoch will follow the war. The experience of European nations has changed their whole outlook to life, and we in this country will have to face the competition of cohesive nations and state governments which have developed a degree of paternalism and a commercial and agricultural organization hitherto deemed utterly impossible. The United States can not meet this competition save through the development of the gray matter of her citizens to the highest degree of efficiency. The difficulties which overtook us on the outbreak of the war by reason of dependence of our industries on supplies only obtainable from other countries have already focused this matter on our attention. It will be suicidal to deny our young men the benefits of collegiate training through a failure to support, maintain and properly equip institutions of this character. They constitute our main dependence in meeting the fierce industrial and agricultural competition which will surely follow the declaration of peace. It is for these reasons which are economically sound and wise that I urge upon you the necessity of securing the increased appropriations sought in order that Georgia may maintain her status in the sisterhood of states and continue to grow and prosper, both during the period of the war and the trying era which will follow its close. Presumably, the legislature will offset the increases due under the Smith-Lever Act, since the state is already formally committed to this policy. In that event we will be able to retain the services of the young men who graduated this year and meet the request of many counties for the placing of agents therein.

The most urgent need of the institution aside from an increase in maintenance is the appropriation of \$60,000.00 for the erection of a suitable building for our animal husbandry division. The work of this division can never be properly coordinated until this is done nor can the needs and requirements for the instruction of the young men of Georgia along this line be successfully met until a special structure is provided for this work. The investments of our farmer in live stock entitles this phase of our agriculture to this consideration and recognition. It is an injustice to the boys of Georgia to expect them to judge stock in the open



during rainy and cold weather. It is impossible to assemble the equipment needed for work of this character without a suitable building in which to house it, and just so long as we are without the same, the young men of the state must go elsewhere to gain the actual experience in the handling of live stock which our lack of equipment prevents us from affording them at the present time. The need of such a building is appreciated by live stock organizations of every character throughout Georgia, and it has been unanimously recommended by the Georgia Dairy and Live Stock Association that the legislature be petitioned to furnish the funds for a livestock pavilion this year. A large and representative committee of farmers and stockmen was appointed to see that this matter was called to the attention of the legislature. They ask your endorsement of this proposition and your aid in carrying the plan into effect.

It is very important that the Mack property and other land owned by negroes contiguous to the poultry plant be purchased. Their continued occupation of this property is both a menace and a nuisance. It would not take over \$10,000.00 to secure it, and I hope you can find ways and means of accomplishing this most desirable end.

There are those who seem to think that our requests for maintenance and support are excessive. I feel that they have been stated most conservatively and that if Georgia is to do for her farmers what other states are doing she must recognize the fact that more liberal endowments are essential. North Carolina, for instance, has provided a bond issue of \$3,000,000.00 with which to erect and equip buildings for her state institution. Of this sum her agricultural college will receive \$300,000.00. Tennessee has authorized a bond issue of \$1,000,000.00 for buildings at her state university. The maintenance fund has been increased to \$336,000.-00, which with the federal funds available gives it approximately \$500,000.00 a year on which to operate. Georgia is about the twenty-second state in wealth. She outranks either of the states in question very materially. The student bodies of the other institutions are not larger than in Georgia. The cost of maintaining a boy is less for a year in Georgia than in many other institutions. We are doing as effective instructional work and reaching more people through our extension service than any other southern state. The proportion of Georgia's revenue spent on higher education is smaller than that in most of the other southern states. The large private endowments which are being accorded to various institutions in this and other states show that our requests for aid are both reasonable and necessary. If the Georgia state institutions are to maintain their position and perform their share of the public service expected of them, they must be more liberally endowed. The recognition of this fact in other states fully justifies my contention. These are the reasons, therefore, why even in

the stress of war, the state should respond to the request made by this institution for its more liberal endowment in order that it may perform the highest and most efficient type of public service work in the present emergency and prepare our people to meet the conditions which the future will impose.

It again becomes incumbent on me to record the loss of an honored and valued member of this Board of Trustees. Hon. Judson L. Hand, of Pelham, one of the charter members of the Board was suddenly called by death last October. His untimely demise leaves another gap in the armor of the old guard who have so faithfully and earnestly worked for the institution during the past decade. Col. Hand, as you well know, was a true friend of education and a faithful and earnest supporter of the College. His opinion was sought and deferred to on all occasions. He hated sham and did not hesitate to say so. He believed that the College of Agriculture had a definite and specific mission to perform in the agricultural regeneration of Georgia and the development of its young men for leadership. He did not hesitate to state his position in this regard on every occasion which offered, and so he won for the College many fast and enduring friends and corrected misapprehensions or misunderstandings in the minds of many others with whom he came in contact by reason of his wide acquaintanceship. We shall miss him but it is gratifying to know that the manly spirit and the wise counsel and sympathy which he bestowed upon us during his association with the institution will keep his memory green and serve as an inspiration during those hours of difficulty and trial which we will of necessity have to face from time to time.

The Governor appointed the Hon. J. W. Callahan, of Bainbridge, a member of the Board to fill the unexpired term of Col. Hand. We are fortunate indeed in securing the services of so representative, capable and efficient a citizen, and the judgment and advice he will be able to bring to the counsels of the Board I am sure will be greatly appreciated.

### **Resumé.**

The record of the year is before you. The work of the institution is now so varied and extensive that it is difficult to present it in concise form. In spite of my best endeavors many of the important features of its work have not been mentioned. Details, of course, are uninteresting and busy men do not have time to consider them, but to gain a proper perspective of what the different members of the staff are doing in the way of student instruction, research and extension teaching, it will be necessary to study their reports at some length, and I only regret that you are not in position to do this along with every other citizen of the state. If this were done, I am satisfied that an even higher appreciation of what is being accomplished would be generally evidenced, and

the arduous labors of our staff and the difficulties and obstacles which they have to meet and overcome more generally understood. This would bring about a sympathetic response and a consideration which though generously expressed by many is not always in evidence. There is an idea that the average college professor is a sort of a peculiar animal, impractical, one-sided, and not capable in many instances of viewing the propositions of everyday life with that degree of sanity and acumen which is supposed to characterize business men. This conclusion is both unjustifiable and erroneous in so far as it applies to the men associated with technical work or applied instruction since they are forced of necessity to meet, consider and aid in the solution of the very problems which confront the business man and the farmer. It would be an advantage if the public were to revise to some extent its opinion of the college professor and recognize in him a capable, earnest, hard-working, conscientious public servant. The nation which has forced us into war and which now has the world by the throat believed in the capitalization of the gray matter of its citizens. It did it most effectively. We think their ideals and their notion of culture extremely faulty, which is undoubtedly true, but we must admit the wisdom of the policy by which they trained an army of soldiers, scientists and savants capable of empowering Germany to develop her natural resources to a degree never witnessed before and provide substitutes out of hitherto raw, unknown and unappreciated materials which after the shock of three years of bitter and furious warfare still permits her to present a virtually unbroken front to the enemy.

It is both a pleasure and a privilege to again express my appreciation to the members of the staff for the active, sympathetic and considerate manner in which they have performed every service and obligation resting upon them. The esprit de corps is of the very highest type, and the relations of the staff, student body and the people of the state, in so far as I can gather, highly satisfactory. The success of the College has naturally been due to the team work of the various individuals of which it is comprised. There has never been a time when members of the staff and students alike were not willing to place the interests and the welfare of the College above personal considerations.

Another gratifying and happy year of association with the Chancellor of the University has passed into the great beyond. My feeling of respect, consideration and admiration for him has steadily grown through the decade in which I have been permitted to know, esteem and love him. He has never faltered in the face of any task. He has ever been ready to sacrifice himself and his personal interests for the good of the cause. He has always supported and encouraged our work in every legitimate direction. He has been a wise and considerate confidant, aiding in smoothing out the difficulties which an institution such as this has to meet



from time to time. He has been a just and eminently fair judge of men and matters, and I can say for the staff as a whole that they feel they have enjoyed a rare privilege and opportunity to have been associated with a man of his philosophic disposition, sterling character, marvelous patience and keen sympathy.

Ten years ago this Board assembled together to consider ways and means and plans for establishing in Georgia a State College of Agriculture to serve her primary industry in some effective manner. Your memories no doubt are still vivid on that point, and in order that we may not lose sight of what has been accomplished, it is not inappropriate that we should recall that occasion for the time being.

Today you look out of the windows of one of the finest College buildings in the south. It stands as a monument to the cause of agricultural education. You view one of the most beautiful landscape effects to be found in Georgia. You traverse the halls of a great building and see the excellent classroom and laboratory equipment which has been assembled for the instruction of the youth of Georgia. You pass in review a faculty of 237 people as compared with the seven who met you on that occasion. You look to the east and you see the veterinary laboratory and hospital; to the south, the agricultural engineering building and the green-houses. You lift your eyes and look out across the landscape and on the far horizon you see the bounds of the domain which has come under your hands. In the distance are the main barns, and in the foreground the improved acres, once little better than waste land which have now been reclaimed and made fertile. You look over the inventory and find that the property in your charge is worth over \$530,000.00, and you realize that Georgia possesses one of the finest plants for agricultural instruction and extension teaching which has been developed anywhere in the south. All of this no doubt brings a feeling of pride and gratitude into your hearts. It is an achievement of which you have reason to feel proud, and which if you receive no other recognition will ever be a source of inspiration and satisfaction to your inner consciousness.

I am fortunate in that I have been permitted under your wise guidance, mature judgment, uniform courtesy and support to be the humble servant to carry into effect in so far as possible your plans and wishes with reference to the ordering of the work of this institution along what appear to be fundamental and constructive lines.

Thanking you for the personal interest you have always displayed in my welfare and for the kindly consideration extended me on all occasions, and trusting that you may feel that this report justifies the faith you have reposed in me, I am,

Very respectfully,

ANDREW M. SOULE,

President.

















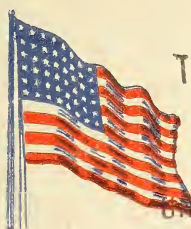
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Bulletin 153

# Bulletin Georgia State College of Agriculture



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*The State, the Nation and the Cause*

## Annual Report 1917-1918

Andrew M. Soule, President

# Georgia State College of Agriculture

University of Georgia, Athens, Georgia

## Administrative, Technical and Extension Staff

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JOHN R. FAIN	Professor of Agronomy
MILTON P. JARNAGIN	Professor of Animal Husbandry
H. P. STUCKEY	Professor of Horticulture
LEROY C. HART	Professor of Agricultural Engineering
W. A. WORSHAM, JR.	Professor of Agricultural Chemistry
THOMAS W. REED	Registrar
WILLIAM M. BURSON	Professor of Veterinary Science
†*J. PHIL CAMPBELL	Director of Extension
*GUY W. FIROR	Supervisor Extension Schools
JAMES B. BERRY	Professor of Plant Pathology and Forestry
†*MARY E. CRESWELL	Director of Home Economics
*L. M. CARTER	Junior Professor, Soil Chemistry
*DAVID D. LONG	Soil Expert in State Survey
GEORGE A. CRABB	Junior Professor of Agronomy, In Charge of Soils
†*JOHN K. GILES	State Supervisor, Agricultural Clubs
LOY E. RAST	Junior Professor of Agronomy, In Charge of Cotton Industry
JOHN T. WHEELER	Professor of Vocational Education
ETHEL REESE	Secretary to President
*MARION W. LOWRY	Adjunct Professor of Soil Chemistry
O. T. GOODWIN	Adjunct Professor of Dairy Husbandry
†*JAMES E. DOWNING	Assistant State Supervisor Pig Clubs
EARL G. WELCH	Adjunct Professor in Agricultural Engineering
†*G. V. CUNNINGHAM	Assistant State Supervisor County Agents
†*WILLIAM BRADFORD	Assistant State Supervisor Agricultural Clubs
†*G. L. BIGFORD	Scientific Assistant in Animal Husbandry
†*LOIS P. DOWDLE	Assistant State Supervisor, Home Economics
†*MRS. BESSIE S. WOOD	Assistant State Supervisor, Home Economics
P. O. VANATTER	Superintendent Field Experiments
A. P. WINSTON	Foreman of College Farm
†*M. C. GAY	Field Agent in Marketing
†*W. F. WHATLEY	District Supervisor County Agents
†*J. G. OLIVER	District Supervisor County Agents
†*R. A. STRATFORD	District Supervisor County Agents
†*L. S. WATSON	District Supervisor County Agents
†*R. P. HOWARD	District Supervisor County Agents
*ELMO RAGSDALE	Field Agent in Horticulture
HENRY T. MADDUX	Editor
J. E. SEVERIN	Instructor in Veterinary Medicine
W. C. BURKHART	Instructor in Veterinary Medicine
*MORRIS WILLIAM H. COLLINS	Field Agent in Agronomy
R. E. BLACKBURN	Adjunct Professor of Horticulture
†*J. V. PHILLIPS	Senior Drainage Engineer
†*C. A. MARTINI	Field Agent in Animal Husbandry
L. H. MARLATT	Scientific Assistant in Animal Husbandry
*C. L. VEATCH	Field Agent in Agronomy
†*CHARLES A. PYLE	Field Veterinarian
L. M. SHEFFER	Junior Professor of Vocational Education
W. R. NESBIT	Field Agent in Beef Cattle
E. W. HADLEY	Extension Forester
J. A. MCCLINTOCK	Extension Pathologist
E. S. BRASHER	Specialist in Hog Cholera
G. C. SCHEMP	Adjunct Professor of Farm Management
T. O. DICKEY	Adjunct Professor of Poultry Husbandry
NELLE REESE	Librarian
†*MRS. E. M. ANDREWS	District Agent, Home Economics
MRS. HOYLE SKINNER WILSON	District Agent, Home Economics
LAURA BLACKSHEAR	Artist
C. B. SWEET	Foreman of Greenhouse and Grounds
CRCIL N. WILDER	Tutor in Agricultural Chemistry
OLIVE BELL	Clerk and Stenographer
NORA SAYE	Clerk and Stenographer
ANNIE MAY PENLAND	Clerk and Stenographer
*MRS. E. T. EPPS	Clerk and Stenographer
AGNES HADDOCK	Clerk and Stenographer
*MRS. MAY THORNTON	Mailing Clerk
*MYRA WILHITE	Multigraph Operator
*FERN THOMPSON	Stenographer
*MAGGIE DuBOSE	Stenographer
*MARGARET COX	Stenographer
*LOUISE HUDSON	Clerk
WILLIE SMITH	Stenographer
SUSIE DuBOSE	Stenographer
ILENE BRAY	Clerk

\* In Extension Service.

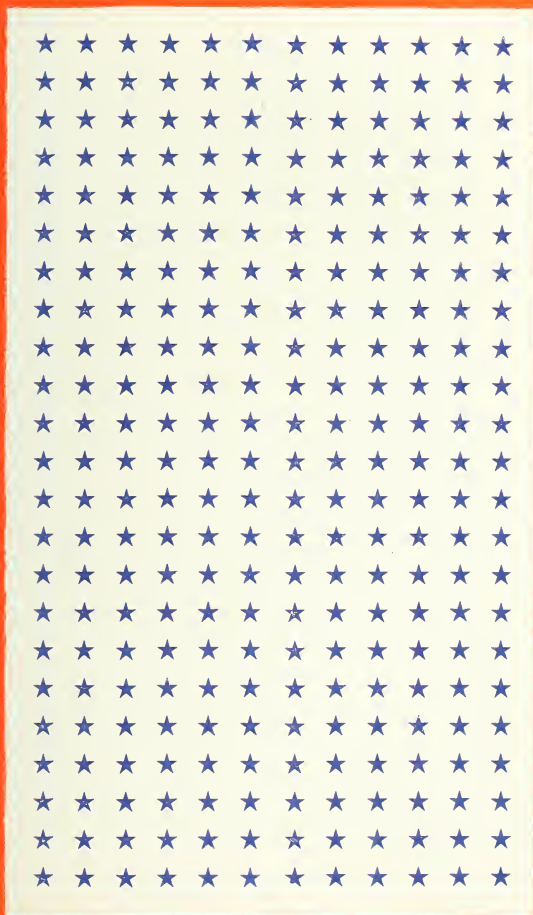
† In Cooperation with U. S. D. A.



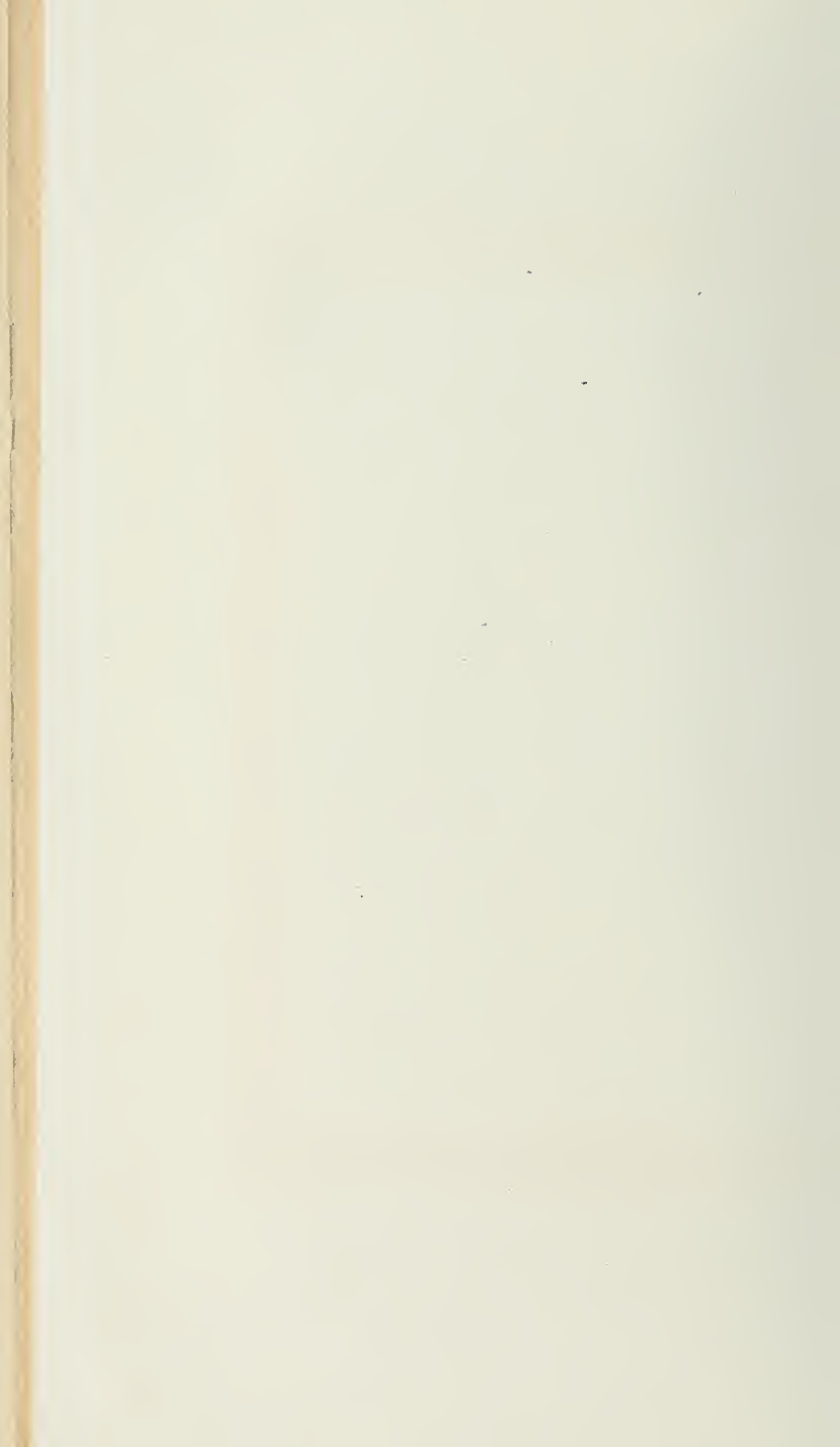
# SERVICE FLAG

Georgia State College of Agriculture

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The service flag of the Georgia State College of Agriculture carries 276 Stars in honor of its professors, extension workers, graduates and students, in Military Service. Of these stars 259 are for students and alumni.



# Report of the President, State College of Agriculture and the Mechanic Arts

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TO THE HONORABLE BOARD OF TRUSTEES

Of The Georgia State College of Agriculture.

Gentlemen:—

It is with pleasure that I transmit for your information my eleventh annual report of the work accomplished by the Georgia State College of Agriculture and the Mechanic Arts for the College year 1917-1918.

The increase in agricultural wealth in Georgia during the last year has been phenomenal not only because of the unprecedented prices received for cotton and general farm crops, but because we were blessed as a people with one of the most bountiful harvests that ever sprung from Georgia soil. The total value of all farm crops in this state in 1909 was \$226,595,000, while last year we produced approximately \$540,000,000 worth of crops, an increase in value over 1909 of 139 per cent. With this veritable embarrassment of riches comes a greater tendency on the part of our people to invest in the luxuries, and hence the need at this time as at no other in our history of the gospel of conservation not only of our food products but also of our economic wealth. Our crop resources seem to have been evenly distributed and today all of our people are in a better condition financially than they have ever been before, regardless of the high prices they have had to pay for necessities.

One of the main things that has contributed to the great increase in agricultural wealth has been the change from a one-crop system to a system of general diversification. The College since its foundation has always preached the gospel of diversification, but it was only with the advent of the boll weevil that our people were made to see its real value. The boll weevil wrought such ravages in Texas that all the labor went to the cities, credit was denied the farmer and many fertile acres that had before borne fruitful harvests were abandoned. In some sections of Mississippi and Louisiana the economic status of the farming population was almost destroyed. What has been the case in Georgia?

So well had our people been warned of the destructive work of the boll weevil and the diversification that was absolutely necessary with its presence, that when it came, our people were prepared to grow other crops than cotton and already had a sufficient number of livestock on hand to lay the foundation for the great livestock industry we are so surely building. There has been no great economic upheaval in Georgia and the College of Agriculture is to be congratulated on the record it has made in giving leadership to this movement.

The state will soon feed itself. At the present rate of increase in livestock we will be on a self-sustaining basis in three or four years as to our meat supply and, with the great increase in the acreage of cereals, we will save millions of dollars which we have been sending to other sections of the country for food.

The world needs food. Realizing upon the declaration of war that a food crisis would surely come, the College made every effort to arouse the people to the seriousness of the situation. Food meetings were held in every section of the state and so earnestly was the plea for greater production emphasized, that Georgia has raised during the last year by far the largest food crops in her history. Following this came a campaign of conservation, in which every member of the faculty and extension force served under the banner of the Federal Food Administration, and taught our people not only why, but how they should save wheat, meat, fats and sugar. The effectiveness of the leadership in this field was officially recognized when Georgia was called by the Food Administration at Washington "the pivotal state of the Union in Food Administration work."

The excellent work that our state colleges of agriculture have been doing was never so clearly recognized as today. The government, because of the fact that they have given so large a part of the leadership for the great army that we have mobilized for war, is urging them to put forth every effort to train as large a number of men as possible for the service. In recognition of the good work that our institution is doing the government has sent us 160 men for training and this number will be increased as rapidly as accommodations are prepared. I call this matter to your attention in order that some means may be provided whereby the College may have the privilege of training larger and larger quotas of men for army service.

Science is playing a big part in winning this war; in fact, it is the basis on which are predicated all the great war movements. It has been truly said, "Guns will not win this war, ships will not win this war, food will not win this war, but the science that lies behind the making of these guns, the building of these ships and the growing of this food." The institution needs more young men to train in the sciences and I trust you will aid us in calling this matter to the attention of high school graduates that they may enter college and prepare themselves for the most efficient service that they can render their country. The way in which the technical schools have come to the aid of the government in training so many young men so thoroughly fully justifies their existence and proves beyond a doubt that the youth of the future should be better trained and prepared in the fundamental sciences that make for production and conservation. Men of vision perceive that with the close of the war the fiercest industrial struggle of the ages will occur by reason of the changed order of events in European countries.



### Attendance

The attendance this year has been unusually good when it is considered how many young men the army has taken who would ordinarily be in college. The total enrollment has been 1041. This represents an increase in attendance over last year of 5 per cent., which is remarkable when it is compared with the records of many educational institutions where there have been losses of twenty-five per cent, and even more. Of the number registering 237 were in the College of Science and Engineering and 804 in the College of Agriculture.

#### Student Enrollment by Years

Year	Long Courses	Short Courses	Total
1908 - - - - -	67	104	171
1909 - - - - -	62	124	186
1910 - - - - -	98	100	198
1911 - - - - -	115	110	225
1912 - - - - -	161	66	227
1913 - - - - -	185	165	350
1914 - - - - -	182	284	466
1915 - - - - -	191	350	541
1916 - - - - -	200	219	419
1917 - - - - -	209	543	752
1918 - - - - -	166	*638	804
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Total - - - - -	1636	2703	4339

You will observe that since the College reorganized 1636 students have received instruction in the long courses and 2703 in the short courses, making a total of 4339 for an eleven year period. There was a slight decrease in the number of students taking the long courses, but this was expected on account of the unsettled conditions that followed the declaration of war and the volunteering of so many of our students for the service.

A normal attendance is expected next year. All young men with high school training have been urged by President Wilson and by Secretaries Baker, Houston and Daniels to enter the A. & M. Colleges that they may receive that type of training that will best fit them to serve their country in a military capacity. Says Secretary Baker in a recent letter to the Chancellor of the University, "Military instruction under officers and non-commissioned officers of the Army will be provided in every institution of college grade, which enrolls for the instruction 100 or more able-bodied students over the age of eighteen. The necessary military equipment, so far as possible, will be provided by the Government. Enlistment will be purely voluntary but all students over eighteen will be encouraged to enlist." This work will be coördinated with the instruction which

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\*Includes 160 men sent by the United States Government.

we are already giving our students through the Officers' Reserve Corps and to the men who enlist in the new service it is expected that the government will give the regulation sustenance pay of nine dollars a month and the uniform. This will be a material help to our young men and encourage a larger number than ever to come to us for training.

Of the students who have left College during the year in almost every case the man went to the army or back to the farm to take the place of an older brother who had been drafted. The freshman class maintained its high attendance record in spite of wartime conditions and has done excellent work. On account of high entrance requirements, we are receiving better and more thoroughly trained men from year to year and the improvement in the general personnel of the student body is encouraging.

Not counting the young men whom we are training for army service, during the year 478 people attended our short courses, some of which are given in the winter and others in the summer. This represents an increase in attendance on these courses of 285 per cent during the last ten years. There is an evident tendency on the part of mature men and women to learn more of the scientific principles which underlie Georgia's basic industry and on which the lasting success of our state depends.

Special attention has been given to the instruction of boys and girls both in club work and in the fundamental principles of practical agricultural practice. A special course will be held for them at the College this summer from August 8th to 16th. Another school will be held for boys in the fall in connection with the Southeastern Fair Association in Atlanta.

The foregoing attendance records by no means represent the total amount of instruction given or the number of people reached by the College of Agriculture. There have been held by county agents and specialists during the year 2,233 meetings that have been attended by approximately 240,864 people. Individual instruction has been given to thousands of farmers, called "demonstrators," and with their cooperation 34,403 demonstrations have been carried out in growing eight staple crops. In addition to this, notable work has been done in teaching home economics and domestic science principles to women in rural districts; and in the boys' and girls' clubs there were approximately 19,000 young people enrolled and working.

### Student Interests

In all lines of student endeavor in the University agricultural men are proving themselves leaders. They are well represented on the staffs of student publications and in the clubs, and have furnished a majority of the class presidents during the last few years. In Y. M. C. A. work and in the military department they have shown especially good leadership.

The work of all the classes has been satisfactory. There have been changes in several departments on account of the professors going to the army, but in spite of such interruptions the interest displayed by the students in their work has been gratifying to the administrative office and to their instructors.

The Agricultural Club has been very successfully conducted by the students and to them the honor for its success is due. It has had the best average attendance of any club in the University and has been of great service in drawing the students into close fellowship. Members of the faculty have appeared on its programs on several occasions.

The student publication conducted by our men is known as the "Agricultural Quarterly." It has had a good year from a financial standpoint, and the articles that appear in its columns are unusually well prepared. Several men by good work have proven themselves worthy of reception into the honorary fraternity, the Alpha Zeta.

The agricultural building through the aid of the students has been kept in excellent condition. Its neatness and businesslike appearance is typical of the spirit not only of the student body but also of the entire institution. As a recent visitor to the College put it, "The very atmosphere is impressive."

### Alumni

It is nine years since the first class graduated from the College of Agriculture and during this time one hundred and thirty men have been given their degrees. There were in this first class Mr. T. G. Chastain, Mr. W. F. Dobbs, Mr. J. K. Giles and Mr. R. L. Nixon. Mr. Chastain is today agricultural agent for Fulton County and the city of Atlanta; Mr. Dobbs is manager of the Barrett Company of Athens, which controls the sale of fertilizer in eleven southern states for the Barrett Company of New York; Mr. Giles is Assistant Extension Director of the Georgia State College of Agriculture, and Mr. Nixon has offices in the Bureau of Markets with the United States Department of Agriculture. I mention these young men to show you how well our first graduates are serving in the field for which they were trained.

Statistics taken prior to the opening of the war showed that 95 ½ per cent of all graduates were in some form of agricultural work and that 90 per cent of the men were serving in the state of Georgia. This is a remarkable record and one that I doubt can be equalled by any other institution in the state. As competition becomes keener we see more than ever before the need of reorganizing our system of agriculture and placing it on a permanent, scientific basis, and we are proud to know that our graduates are having a large part in this reorganization and that our people are beginning to realize what agricultural education may mean to our state.

Our alumni have always been loyal and ready to serve. You will remember that last year's graduating class volunteered its services

to do field work without pay in the interest of greater production of food crops and that they served most acceptably. This year our graduates are volunteering for army work in the training camps. Though it is with regret that we note the loss of these trained men, when the needs of our state so clearly indicate the great service they could render at home, we deeply appreciate that patriotic spirit that carries them to the colors and we see in it the exemplification of that loyalty and willingness to serve that has always characterized our alumni.

We need in every county in the state for agricultural instruction one home demonstration agent, one home economics teacher, one county agent and one vocational teacher as a minimum requirement. To fill this need you will see that it will require 608 thoroughly trained men and women, but this ideal does not by any means represent the demand for agricultural instruction in the state, for this year Mitchell County is asking for three teachers in Vocational Agriculture.

Of the one hundred and thirty graduates of the College, forty-eight of them are in army service and a remarkably high per cent of them have received commissions, though they were advised by Secretary of War Baker to stay in the field and not go into the training camps until they were absolutely compelled to in order that they might give the state the advantage of their training as long as possible. Though we shall miss their services in the agricultural work of the state, we are glad to see them occupying places of leadership and responsibility that will bring to them and to their Alma Mater honor and to the nation victory and peace.

As a fitting tribute of their appreciation for their Alma Mater, our alumni have raised \$3,559 to be used in the building of an alumni hall at the College of Agriculture. Of this amount \$594 has been received as cash and the remaining \$2,965 is in the form of notes.

### **District Agricultural Schools**

At the annual meeting of the principals of the district agricultural schools, which was held in the executive office on April 22nd and 23rd, a new record was established in that all of the principals were present. Great enthusiasm and interest were shown in all the problems relating to the schools and there seemed to be an earnest desire on the part of all the principals to cooperate with each other and with the College in all phases of the work. Everything possible is being done to bring about uniformity in the curriculum and in the general practice of these schools.

The text book committee has rendered valuable service and at the present time it is working to determine what books will be used in carrying out the vocational work as outlined in the Smith-Hughes Act. All of the schools, I believe, have qualified under the act inasmuch as the minimum requirement in laboratory equip-



ment, which we have been urging, is more than that required by the terms of the Smith-Hughes Bill.

It was reported that the general schedule of having two classes in recitations and two in laboratory in the morning and the same work in the afternoon, could not be improved upon where any considerable amount of laboratory work was undertaken. The committee on the fixing of fees advised that the following scale be adopted for the various courses:—Entrance fee \$2.50, physics \$1.00, Chemistry \$2.50, agriculture \$1.00, home economics \$2.50, and shop \$2.00. The Vocational Educational Board requested that the principals put a value on the perquisites that would be given to teachers and that they be valued at \$240.00.

The work and the text books to be used in the home economics courses were referred to the text book committee and this committee asked that Miss Creswell, who is director of our Division of Home Economics, call a meeting of the teachers of domestic science in the district schools. In accordance with this request a meeting of the domestic science teachers was held at the College on May 4th and at this meeting Miss Creswell laid before them her recommendations as to text books and the development of the courses. The plans as outlined were approved.

The annual contest of the district schools was held in Athens on April 22nd and 23rd. One hundred and three boys and thirty-eight girls participated in the meet and about a hundred students came from the nearby schools to cheer for their contestants. The competition was very keen and the winner of the grand banner had only a half point margin on its nearest competitor.

The grand prize was won by the Ninth District School at Clarkesville, the literary banner by the Fifth District School at Monroe, the industrial banner by the Sixth District School at Barnesville, and the athletic banner by the Second District School at Tifton. A unique feature of the contest this year was the fact that the Fifth District School won both sides of the debate in the preliminary contest, and the debate was not between schools but was between two teams from the Fifth District School. Medals similar to the type used last year were awarded to the winners in the various events through the courtesy of the Virginia-Carolina Chemical Company.

The contestants from the schools were well taken care of and seemed to thoroughly enjoy the occasion. It was by far the most successful meet that has been held not only in point of attendance but as to interest and general good. A delightful luncheon was served to the contestants and visitors by the District Home Demonstration Agents of the College on the last day of the meet.

#### **Winter Meetings of Farmers and Farm Women**

The annual winter meeting of farmers and farm women was held at the College of Agriculture in January. There were present representatives of the Georgia Dairy and Livestock Association, the State Horticultural Society and the Georgia Breeders' Associa-

tion in addition to a number of farmers and farm women. There was a meeting also of the county demonstration agents and the home demonstration agents at this time. Though the meeting was well attended, it was felt that summer would be a more opportune time for the holding of the annual meetings of the Dairy and Livestock Association and the Breeders' Association, hence these meetings will be held in the future during the summer. The regular winter meeting for the county agents and the home demonstration agents will be continued.

The following distinguished gentlemen from outside of the state delivered addresses: Mr. Howard C. Arnold, Secretary of the Federal Farm Loan Bank, Columbia, S. C.; Dr. Charles Dearing, United States Department of Agriculture, Washington, D. C.; Prof. H. H. Wing, Cornell University, Ithaca, N. Y., representing the Holstein-Friesian Association of America; Mr. C. T. Rice representing the American Guernsey Cattle Club; Mr. J. H. McClain of the United States Department of Agriculture; Dr. H. B. Brown, Agricultural College, Miss.; and Mr. G. S. Meloy of the United States Department of Agriculture. The Percheron Society of America and the American Shorthorn Cattle Breeders' Association were represented at the meeting with moving picture reels showing prize winning animals at the leading stock shows and on the principal breeding farms of America.

Dr. T. H. McHatton was continued as secretary of the Georgia State Horticultural Society, Prof. M. P. Jarnagin as secretary of the Georgia Dairy and Livestock Association, and Prof. Loy E. Rast as secretary of the Georgia Breeders' Association. The members of our staff have given gratifying cooperation in all the work of these associations, and their services have been highly appreciated by the members of the associations.

At the annual meeting in 1917 all three associations adopted strong resolutions requesting the Georgia Legislature to make an appropriation of \$60,000.00 for the purpose of erecting a livestock building at the College commensurate with the needs of the state in this particular line of work. Last summer it was deemed advisable on account of war conditions that this request be not brought to the attention of the Legislature. However, since the demands for such a building are becoming daily more urgent it seems advisable to present this matter to the attention of the Legislature during the coming session.

The following committee was appointed to take the matter up with the proper representatives of the Georgia General Assembly: I. C. Wade, Cornelia; B. W. Hunt, Eatonton; T. J. Simpson, Rome; S. C. Andrews, Cuthbert; W. R. Bowen, Fitzgerald; W. J. Mullis, Waycross; E. T. Comer, Mill Haven; M. B. Lane, Savannah; Judge James Hick, Dublin; R. C. Neely, Waynesboro; J. C. McAuliffe, Augusta; C. H. Bonner, Milledgeville; E. A. Barnett, Washington; J. J. Conner, Cartersville; W. T. Anderson, Macon; H. H. Tift, Jr.,

Tifton; J. B. Wight, Cairo; C. L. Bennett, Jefferson; J. R. Brown, Ashburn; Capt. W. B. Rice, Dublin; J. H. Hooks, Warthen; W. I. Harley, Sparta; M. P. Jarnagin, Athens; Evans Lunsford, Covington; Gunby Jordan, Columbus; J. Pope Brown, Hawkinsville; Ed Cornwell, Lavonia; Jack Craft, Hartwell; P. S. Cumming, Lela; C. F. Shingler, Ashburn; E. J. Willingham, Macon; Henry Watkins, Atlanta; R. E. Ellington, Fayetteville; J. T. Anderson, Marietta; W. H. Peacock, Cochran; J. D. Weaver, Dawson; H. A. Petty, Dawson; R. F. Shedden, Atlanta; and L. W. Jarman, Porterdale.

A new feature this year was the view herds of beef cattle sent forward for exhibition by public-spirited breeders of the state. Mr. George T. Stallings of Haddock, Ga., had his splendid herd of Short-horns exhibited, and Mr. W. L. Florence showed an excellent herd of Hereford cattle.

The Georgia Breeders' Association has done very good work in standardizing and systematizing the production and sale of breed seed. During the last year a total of 77 certificates were issued showing that the producers had complied with the necessary requirements for the sale of pedigreed seed. In addition to this the Southeastern Fair in Atlanta and the State Fair at Macon have provided a premium list for \$550.00 for pedigreed seed, consisting of cotton, corn, oats, wheat, rye, velvet beans and peanuts. It is felt that this will do much towards stimulating the production of more dependable seed throughout the state of Georgia.

A delightful luncheon was provided by a committee of public-spirited citizens of Athens, led by Hon. M. G. Michael, and approximately six hundred visitors and delegates enjoyed this hospitality. The lunch was prepared and served by the domestic science division of the College.

### Extension Teaching

In February and March eight extension schools were held at the district agricultural schools located at Statesboro, Douglas, Tifton, Americus, Barnesville, Granite Hill, Madison and Monroe. Douglas and Monroe were added to the number of schools for this year and there seems to be a probability of placing this form of extension teaching at the remaining agricultural schools next year. The above named schools were selected because they were cooperating with the College in the maintenance of certain of our extension projects. The total attendance for the eight schools was 9,600.

On account of the bad roads and the bitter cold weather that prevailed when some of these schools were held, it was decided they would be more widely attended and would give better service to a larger number of farmers if they could be held in the summer, so it has been decided to visit the district schools in July and August this year in the hope that the schools may be even more successful than they have been in the past.

Systematic formal instruction was carried on at each one of

these schools for a week, the lecture work being almost identical in type to that given at the winter short courses at the State College of Agriculture. The limited facilities of the district agricultural schools were supplemented by large amounts of laboratory equipment sent from various departments of the College. The great interest shown in these schools during the last winter indicates that this particular work is of a permanent character and capable of developing into an institution of unusual value to the public.

These extension schools tend to focus the interest of the people of a particular congressional district upon their own district and mechanical school in a manner that will promote agricultural instruction in every district of the state. The College is limited in its ability to extend very materially this work because of the small amount of money at its command and for the fact that but few of the members of the regular teaching staff are available at this time of the year when the College is in session. Every effort will be made, however, to develop this work, as it is an essential form of constructive extension teaching and one that has gained the appreciation of the intelligent farmer who is seeking for specific knowledge in scientific agriculture.

### Summer Courses

The collegiate work usually given during the summer has been increased and has been merged into the summer school work of the University. It is probable that there will be a demand for a fourth term of College work, and this coordination with the Summer School seemed the best means of developing the work towards this end.

The graduate work heretofore offered during the summer has been withdrawn for the period of the war, inasmuch as prospects were not bright for a sufficient number of men to justify the time of the instructors for this work under present conditions. Four men registered for graduate courses this year.

The regular summer school work given to teachers will be continued this year. This has been a popular class of work for teachers and should be a great deal more so with the growing interest in vocational agriculture.

Last year the boys' and girls' short course was held at the same time as the Summer School, but this year it will be held just following it in order that the large number of boys and girls expected may be well taken care of in the dormitories and at the dining hall.

For the first time a course will be offered this summer in cotton breeding, and this course together with the cotton grading course will count as collegiate work towards a degree. Two men, one from South America and the other from China, have already applied for these courses. As usual, the summer cotton grading work will be open to those more mature students who are not interested in a degree but who wish specialized work in cotton grading.



A large number of schools in Georgia have qualified under the Smith-Hughes Vocational Act and are now seeking teachers of secondary agriculture. In normal times graduates of the College of Agriculture would have been available for this work, but so many of our young men have volunteered for army service that the demand for agricultural teachers far exceeds the supply. To meet this exigency the College is offering a three months' war emergency course in vocational agriculture to experienced teachers in the field who have had successful farm practice and a requisite amount of science work sufficient to enable them to take the courses. The courses will consist of specialized vocational work in farm crops, soil physics, soil fertility, agricultural engineering, horticulture, animal husbandry and agricultural education. I am informed that fifty-seven applications have already been received for these courses. This is purely a war emergency work and will not be continued next year unless the situation demands it.

Feeling that this institution should render the greatest possible service to our country in helping to win the war, an offer was made to the War Department to train men for specific lines of work in army service. Our offer was accepted and on May 15th eighty men reported for training in auto mechanics, forty men in forge work and forty in carpentry. These men are at present housed in New College and Candler Hall, but barracks are being provided for their reception on Lucas Hill. The county of Clarke and the city of Athens have under advisement a plan for furnishing additional facilities looking to the training of a thousand men by September. The College stands ready to give instruction to these men in case the facilities for handling them are provided by the people of the city and county.

Since one of the essential factors in determining the value of the tractor is the knowledge of how to operate it successfully, and since so many tractors are being bought by Georgia farmers, the College is offering a five-weeks course of instruction to tractor owners this summer, the course to begin in July. A number of tractor manufacturers will furnish tractors and men to handle them, and the course should do a great deal towards encouraging the use of the tractor and teaching farmers how to operate them with success. By using the tractor more acres may be cultivated and more land given over to the growing of food crops.

### **Boys' and Girls' Short Course**

The Boys' and Girls' Short Course was held in July of last year and was attended by 185 boys and 85 girls, which constitutes a record attendance. These young people were sent to the College through the kindness of the Southeastern Fair Association; the Georgia Railroad; the Atlanta, Birmingham and Atlantic Railroad; the Georgia State Fair Association; the Georgia, Southern and Florida Railroad; the Georgia-Florida Fair Association; the Woodruff Fair

Association; the Wrightsville and Tennille Railroad; Swift & Company; and through the kindness of public-spirited county commissioners, county boards of education, women's clubs, bankers and business men.

The Short Course was held at the same time that the University Summer School was in session, and all of the entertainments which that school gave were enjoyed by the boys and girls. However, this year lack of proper accommodations makes the continuation of this plan impossible and hence it has been decided to bring the boys and girls to Athens in August just following the Summer School.

While in Athens at the College the boys and girls are given special courses in fertilizers, soils, seed selections, rotation of crops, live-stock production, dairying, farm machinery, poultry, insect pests and plant diseases, and many other kinds of farm work. They make a careful study of the College farm, taking note of all the improved methods we are using and study the different crops in the field in

#### Yield of corn in Georgia.

WHEN CORN CLUBS BEGAN IN 1906	
YIELD IN 1917	

detail. These summer courses give the boys and girls a new viewpoint of farm life and of the importance of the club work they are doing. It encourages the boys to take higher agricultural training and brings them in closer touch and sympathy with the work of the College, and shows them as nothing else could the opportunities of leadership in the field of agricultural science.

#### Reports of Several Divisions

As you will notice from the reports of the professors of the several divisions, their duties are increasing very materially year by year. Our men are in their offices from 8:30 A. M. to 6:00 P. M. with an hour and a half's intermission at noon. We have a teaching year of nine months exclusive of the Summer School and then two months of farmers' institute work is required, giving our men eleven months of work instead of nine as is observed in many educational institutions. However, under the stress of war conditions, the College will remain open all summer and some of our teachers have voluntarily agreed to teach twelve months in the year as long as the war lasts. You will recognize that there is a dearth of agricultural leadership and so this change is made in an effort to supply the great demand for agricultural men.

Various businesses and organizations, realizing the essential nature of agricultural education and its application to the needs of our people, are making insistent calls upon us for many and varied kinds of service. I am happy to state that we have responded to many of their requests and have aided in the solution of many of

their problems. However, as the calls are rapidly increasing it becomes necessary that we be given more specialists to do the necessary work and to train laymen in the field to cope with the particular problems of their localities.

From the reports of the professors, I believe you will see that they are making a noble response and are fully measuring up to the confidence you have reposed in them. That their work is somewhat onerous and their duties exacting you are fully aware, and I trust that you will carefully consider all of their reports and interpret them in the light of the service they are giving not only to the student body at Athens but to a constituency that is only measured by the citizenry of the state.

Besides student instruction, our professors find time to do research work, farmers' institute work and educational extension service in horticulture, animal husbandry, agricultural engineering and plant pathology. In addition to this, they supervise some special work as the College farm, the demonstration field, and the orchards and grounds. This illustrates that they are busy, faithful and efficient, and permit me to say that I feel privileged to be associated with such a capable, energetic and faithful body of workers.

The College of Agriculture is a young institution and it employs a large number of comparatively young men. At a time like this it is but natural that our men should volunteer for army service, and the record shows that in the last year 42 per cent of our staff have donned the khaki and are now occupying places of leadership and responsibility in the different military organizations.

We regret to lose the services of these young men who were working so hard for the upbuilding of the state along economic and agricultural lines, and who were accomplishing so much in their different fields. However, the call of country was first, and in accordance with your instructions these young men were given indefinite leaves of absence. I know you will read their names with pride and gratification, and will feel that the College was indeed fortunate to be privileged to give so many of its best young men for leadership in the greatest struggle of the ages.

Several of our leading extension men and district agents gave up the work of the College and went back to the farm, a more lucrative field. Others left to accept better paying positions than we could offer them, and with our present resources we have found it impossible to compete with the more prosperous institutions for the services of those efficient and highly trained technical men whom Georgia needs so badly. At the present time, with the record high prices for living necessities, almost any business or vocation is offering larger remuneration than teaching and extension work. This matter is of such grave importance that I feel justified in bringing it to your attention at this time.

## Resignations

\*J. W. Firor, Junior Professor of Horticulture, resigned to enter military service. (First Lieutenant, Infantry).

\*E. C. Westbrook, Field Agent in Agronomy, resigned to enter military service. (Second Lieutenant, Infantry).

\*Rose M. Gridley, Field Agent in Animal Husbandry, resigned to enter military service. (Chief Storekeeper, Navy).

\*W. S. Dilts, Instructor in Poultry Husbandry, resigned to enter military service. (Chief Storekeeper, Navy).

\*Guy R. Jones, Field Agent in Agricultural Engineering, resigned to enter military service. (Second Lieutenant, Infantry).

\*W. H. Allen, Field Agent in Poultry Husbandry, resigned to enter military service. (Sergeant, Infantry).

\*H. L. Brown, Scientific Assistant in Animal Husbandry, resigned to enter military service. (Chief Storekeeper, Navy).

\*C. N. Keyser, Tutor in Horticulture, resigned to enter military service. (Second Lieutenant, Aviation).

\*Paul Tabor, Field Agent in Agronomy, resigned to enter military service. (Second Lieutenant, Aviation).

\*S. H. Starr, Adjunct Professor of Farm Management, resigned to enter military service. (Second Lieutenant, Infantry).

\*I. W. Arthur, Instructor in Animal Husbandry, resigned to enter military service. (Second Lieutenant, Aviation).

\*G. R. Skinner, Scientific Assistant in Dairy Husbandry, resigned to enter military service. (Quartermaster Sergeant).

\*W. H. Howell, Scientific Assistant in Dairy Husbandry, resigned to enter military service. (Provost General's Office).

\*L. H. Kellogg, Field Agent in Animal Husbandry, resigned to enter military service. (Quartermaster Sergeant).

\*T. H. McHatton, Professor of Horticulture, resigned to enter military service. (Captain, Ordnance Department).

James Godkin, Scientific Assistant in Plant Pathology, resigned to accept position with the United States Department of Agriculture.

\*F. C. Anderson, Field Agent in Plant Pathology, resigned to enter military service. (In Training Camp).

\*F. C. Ward, Field Agent in Agronomy, resigned to enter military service. (In Training Camp).

\*W. O. Collins, Instructor in Agricultural Chemistry, resigned to enter military service. (Chemical Department, Ordnance).

\*R. R. Childs, Scientific Assistant in Agronomy, resigned to enter military service. (Photographer, Aviation).

\*J. H. Wood, Adjunct Professor of Poultry Husbandry, resigned to enter military service. (In Training Camp).

\*R. D. Bedinger, Student Assistant in Agricultural Engineering, resigned to enter military service. (First Lieutenant, Aviation).

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\*In military service.



\*E. D. Alexander, Student Assistant in Agricultural Engineering, resigned to enter military service. (Second Lieutenant, Infantry).

\*D. K. Young, Student Assistant in Library, resigned to enter military service. (Quartermaster Sergeant).

\*R. F. Wheelchel, District Agent, resigned to enter military service. (Training Camp, Aviation).

\*R. C. Light, Assistant Pig Club Agent, resigned to enter military service. (In Training Camp).

\*J. K. Greene, Poultry Club Agent, resigned to enter military service. (In training).

\*W. A. Burns, Field Agent in Agricultural Engineering, resigned to enter military service. (In Training Camp).

J. G. Woodruff, District Agent, resigned to farm.

J. F. Hart, Extension Field Agent, resigned to farm.

### Appointments

John T. Wheeler, B.S.A., University of Wisconsin, was appointed Professor of Vocational Education.

B. S. Stuckey, B.S., Alabama Polytechnic Institute, was appointed Professor of Horticulture.

Mary E. Creswell, United States Department of Agriculture, was appointed Director of Home Economics.

R. E. Blackburn, M.S., University of Georgia, was appointed Adjunct Professor of Horticulture.

C. A. Martini, B.S.A., M.S.A., Florida University and Iowa State University, was appointed Field Agent in Animal Husbandry.

L. H. Marlatt, Cornell University, was appointed Field Agent in Animal Husbandry.

C. L. Veatch, B.S., University of Georgia, was appointed Field Agent in Agronomy.

J. K. Green, B.S.A., University of Wisconsin, was appointed Field Agent in Poultry Clubs.

Chas. A. Pyle, B.S.A., D.V.M., Kansas Agricultural College, was appointed Field Veterinarian.

L. M. Scheffer, B.S.A., University of Wisconsin, was appointed Junior Professor of Vocational Education.

J. A. McClintock, B.S.A., Michigan Agricultural College, was appointed Extension Pathologist.

E. S. Brashier, B.S.A., D.V.M., Mississippi Agricultural College and Chicago Veterinary College, was appointed specialist in Hog Cholera.

G. C. Schempp, B.S.A., Cornell University, was appointed Adjunct Professor of Farm Management.

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Note:—Twenty-two county agents resigned to enter military service.

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\*In military service.

- T. O. Dickey, B.S.A., Ohio State University, was appointed Adjunct Professor of Poultry Husbandry.
- J. H. Wood, B.S.A., Connecticut Agricultural College, was appointed Adjunct Professor of Poultry Husbandry.
- F. C. Ward, B.S.A., University of Georgia, was appointed Field Agent in Agronomy.
- L. H. Kellog, A.B., M.S., University of Nebraska, was appointed Field Agent in Beef Cattle.
- E. W. Hadley, B.S.A., University of Georgia, was appointed Extension Forester.
- R. C. Light, B.S.A., Virginia Polytechnic Institute, was appointed Field Agent in Swine Husbandry.
- W. R. Nesbit, B.S.A., Agricultural & Mechanical College of Texas, was appointed Field Agent in Beef Cattle.

### Activities of the Several Divisions

Permit me to call to your attention the fact that in accordance with your expressed wish and in harmony with the purpose and plan for which the College of Agriculture was founded, the three definite lines of service work are being kept in their proper relation and equilibrium.

Agricultural students are being trained in the fundamental sciences of agriculture to the end that they may receive a thorough and liberal education; courses of instruction are being provided so that men and women of limited means may receive the greatest practical benefit by attending short courses of instruction in seasons when work is light; and the College is taking an active part in the dissemination of agricultural knowledge among the farmers of the state by means of extension teaching, farmers' institutes, and by bulletins and other publications of a popular and practical nature, and is encouraging and promoting research in every legitimate way.

This is an age of production, and hand in hand with production must go research work. This type of endeavor is absolutely essential to the future agricultural progress of our state and our nation and is the only correct basis upon which a permanent scheme of agricultural education may be predicated.

The staff of the College has made many contributions to the sum total of agricultural information for the state through its research work. Recognizing the fundamental nature of this work, its members have shouldered this additional burden and have accomplished something worth while. However, for the best success of research work it should be liberally endowed and should be set aside as a definite and specific work. Revolutions are being wrought out by the men who know the how and why of things. We are in a military war and an economic war with a country that has produced ten thousand substitutes and one that under stress has forced

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\*In military service.

everything that it produced to yield the maximum amount of benefit in providing for the needs of its people. The economic war will not cease when peace has been declared, but will be waged more fiercely than ever and it is our duty to prepare ourselves in every possible way for the fight. Research work in the sciences will win that war.

### Division of Extension.

Agricultural extension service at the College of Agriculture is now in its eleventh year and a marvelous growth has been made since its inauguration early in 1908 when an educational train was sent out to visit the farmers in every section of the state. The extension work first embraced projects in horticulture, agronomy, animal husbandry, and boys' and girls' club work. It has been extended from year to year and the extra projects of movable schools, educational exhibits, livestock diseases, dairy extension, publications, marketing, agricultural engineering, and plant pathology have been added.

The extension force now consists of two hundred and eighty-one men and women, fifteen of whom are specialists representing the different classes of project work, forty of whom are state leaders and special workers, one hundred and thirteen of whom are county agents, and one hundred and thirteen of whom are home demonstration workers. Several specialists have been added during the year, but the work is growing so fast that more men and women must be secured if the efficiency of the work is maintained. These specialists visit the agents in the field and help in working out the problems, as for instance when our specialist is called to help in the prevention of a severe outbreak of hog cholera and give educational demonstrations to the farmers sustaining losses.

What the extension men and women have accomplished during the year will be shown you under the different heads which follow.

### Extension Staff

Campbell, J. Phil	- - -	Director	-----	Athens
Giles, J. K.	- - -	Assistant Director	-----	Athens
Oliver, J. G.	- - -	State Agent for North Georgia	-----	Athens
Cunningham, G. V.	- - -	State Agent for South Georgia	-----	Ellaville
Flor, G. W.	- - -	Supervisor of Extension Schools	-----	Athens
Bradford, Dr. Wm.	- - -	Assistant Supervisor of Boys' Club Work,	-----	Cedartown
Downing, J. E.	- - -	State Supervisor of Pig Clubs	-----	Athens
Dowdle, Lois P.	- - -	State Home Dem. Agent for North Ga.	-----	Athens
Wood, Mrs. Bessie	- - -	State Home Dem. Agent for South Ga.	-----	Athens
Bigford, G. L.	- - -	Scientific Assistant in Animal Husbandry,	-----	Athens
Gay, M. C.	- - -	Field Agent in Marketing	-----	Athens
Maddux, H. T.	- - -	Editor	-----	Athens
Ragsdale, Elmo	- - -	State Agent in Home Gardening	-----	Athens
Blackburn, R. E.	- - -	Specialist in Horticulture	-----	Athens
Martini, C. A.	- - -	Field Agent in Animal Husbandry	-----	Athens

Marlatt, L. H.	- - - - -	Scientific Assistant in Animal Husbandry,	Athens
Veatch, C. L.	- - - - -	Field Agent in Agronomy	Athens
Pyle, C. A.	- - - - -	Field Veterinarian	Athens
Nesbit, W. R.	- - - - -	Field Agent in Animal Husbandry	Athens
Brashier, E. S.	- - - - -	Specialist in Hog Cholera	Athens
McClintock, C. M.	- - - - -	Specialist in Plant Pathology	Athens
Hadley, E. M.	- - - - -	Field Agent in Forestry	Athens
McGee, Miss Eva	- - - - -	Specialist in Cottage Cheese Making	Athens
Blackshear, Miss Laura	- - - - -	Artist	Athens

#### Supervisors and Special Agents

Stratford, R. S.	- - - - -	District Agent	Barnesville
Watson, L. S.	- - - - -	District Agent	Tifton
Whatley, W. F.	- - - - -	District Agent	Statesboro
Asbury, T. L.	- - - - -	District Agent	Madison
Howard, R. P.	- - - - -	District Agent	Sparta
Proctor, L. G.	- - - - -	District Agent	Douglas
Williams, E. A.	- - - - -	District Agent for Colored Agents	Savannah
Andrews, Mrs. E. M.	- - - - -	Assistant State Agent	Athens
Wilson, Mrs. Wilbe	- - - - -	Assistant State Agent	Valdosta
Mize, Mrs. Leila	- - - - -	District Agent	Rome
McGee, Miss Eva	- - - - -	District Agent	Augusta
Coclough, Miss Etta	- - - - -	District Agent	Gainesville
Bozeman, Miss Estelle	- - - - -	District Agent	Atlanta
Bond, Mrs. E. G.	- - - - -	District Agent	Columbus
Lanier, Miss Katie	- - - - -	District Agent	Savannah
Crews, Miss Georgia	- - - - -	District Agent	Macon
Philbrick, Martha	- - - - -	District Agent	Valdosta
James, C. M.	- - - - -	Special Agent	Edison
Johnson, J. A.	- - - - -	Special Agent	Valdosta
Baker, Eugene	- - - - -	Special Agent	Gainesville
Williams, Mrs. M. D.	- - - - -	Special Agent	Eastman
Strahan, E. R.	- - - - -	Special Agent	Marietta
Clark, Mrs. T. O.	- - - - -	Special Agent	Richland
Sheppard, Mrs. B. J.	- - - - -	Special Agent	Guyton
Farrar, Elizabeth	- - - - -	Special Agent	Canton
Burton, Jessie	- - - - -	Special Agent	Talbotton
Allen, Floride	- - - - -	Special Agent	Warrenton

#### County Agricultural Agents

Appling	- - - - -	Rogers, Roy	- - - - -	Baxley.
Bacon	- - - - -	Boggan, W. F.	- - - - -	Alma.
Barrow	- - - - -	*Hosch, W. H.	- - - - -	Winder.
Bartow	- - - - -	Cox, Charles	- - - - -	Cartersville.
Ben Hill	- - - - -	Pittman, J. T.	- - - - -	Fitzgerald.
Bleckley	- - - - -	Boland, W. G.	- - - - -	Cochran.
Bibb	- - - - -	Middlebrooks, W. G.	- - - - -	Macon.
Brooks	- - - - -	*Gaddis, M. F.	- - - - -	Quitman.
Bulloch	- - - - -	*Liddell, J. G.	- - - - -	Statesboro.
Butts	- - - - -	Blackwell, J. H.	- - - - -	Jackson.
Burke	- - - - -	Lewis, C. C.	- - - - -	Waynesboro.
Camden	- - - - -	Smith, W. R.	- - - - -	St. Marys.
Campbell	- - - - -	Cown, S. M.	- - - - -	Fairburn.
Candler	- - - - -	*Atkinson, F. W.	- - - - -	Metter.
Carroll	- - - - -	Jackson, E. T.	- - - - -	Carrollton.
Charlton	- - - - -	*Rountree, S. H.	- - - - -	Folkston.

\*Appointed in 1917-18.



Chatham	- - - - -	Dent, Gratiz	- - - - -	Savannah.
Clarke	- - - - -	*Broache, W. E.	- - - - -	Athens.
Clayton	- - - - -	*Huie, W. P.	- - - - -	College Park.
Clinch	- - - - -	*Gaddis, C. H.	- - - - -	Homerville.
Cobb	- - - - -	Sawyer, D. E.	- - - - -	Marietta.
Colquitt	- - - - -	Collier, V. L.	- - - - -	Moultrie.
Coffee	- - - - -	Eunice, C. B.	- - - - -	Douglas.
Coweta	- - - - -	Drake, B. M.	- - - - -	Newnan.
Columbia	- - - - -	Adams, W. C.	- - - - -	Harlem.
Crisp	- - - - -	Turner, J. M.	- - - - -	Cordele.
Decatur	- - - - -	*Davis, J. I.	- - - - -	Bainbridge.
DeKalb	- - - - -	Hunter, R. S.	- - - - -	Decatur.
Dodge	- - - - -	*Alexander, J. R.	- - - - -	Eastman.
Dooly	- - - - -	*White, R. E.	- - - - -	Vienna.
Dougherty	- - - - -	Cromartie, H. L.	- - - - -	Albany.
Early	- - - - -	Martin, C. E.	- - - - -	Hilton.
Elbert	- - - - -	Pitts, D. J.	- - - - -	Bowman.
Emanuel	- - - - -	Treadwell, D. M.	- - - - -	Swainsboro.
Evans	- - - - -	*Brandon, T. B.	- - - - -	Claxton.
Fayette	- - - - -	*Dixon, W. N. D.	- - - - -	Fayetteville.
Floyd	- - - - -	*Adair, S. B.	- - - - -	Rome.
Forsyth	- - - - -	Smith, S. J.	- - - - -	Gainesville.
Franklin	- - - - -	Bryant, C. A.	- - - - -	Royston.
Fulton	- - - - -	Wallace, Carl	- - - - -	Atlanta.
Fulton	- - - - -	T. G. Chastain	- - - - -	Atlanta.
Glynn	- - - - -	Dunn, J. L.	- - - - -	Brunswick.
Gordon	- - - - -	Turk, J. L.	- - - - -	Calhoun.
Grady	- - - - -	Ward, P. H.	- - - - -	Cairo.
Gwinnett	- - - - -	*Kemp, H. H.	- - - - -	Lawrenceville.
Hall	- - - - -	*Thompson, Gordon	- - - - -	Murrayville.
Hancock	- - - - -	Driskell, W. W.	- - - - -	Sparta.
Haralson	- - - - -	Hutcheson, T. A.	- - - - -	Buchanan.
Hart	- - - - -	*Warren, J. H.	- - - - -	Hartwell.
Houston	- - - - -	Howard, R. H.	- - - - -	Perry.
Heard	- - - - -	Jeter, Fred D.	- - - - -	Franklin.
Houston	- - - - -	O'Neal, O. S. (col.)	- - - - -	Fort Valley.
Irwin	- - - - -	Watson, O. D.	- - - - -	Ocilla.
Jackson	- - - - -	*McConnell, Noel	- - - - -	Commerce.
Jasper	- - - - -	McElhany, B. E.	- - - - -	Monticello.
Jeff Davis	- - - - -	Hursey, A. B.	- - - - -	Hazelhurst.
Jefferson	- - - - -	Shirley, C. V.	- - - - -	Louisville.
Jenkins	- - - - -	Parrish, H. H.	- - - - -	Millen.
Johnson	- - - - -	Bridges, Fred T.	- - - - -	Wrightsville.
Laurens	- - - - -	Tyre, J. B.	- - - - -	Dublin.
Laurens	- - - - -	*Robinson, W. F. (c.)	- - - - -	Dublin.
Lee	- - - - -	*Sorrells, W. H.	- - - - -	Leesburg.
Liberty	- - - - -	*Comartie, E. G.	- - - - -	Hinesville.
Lowndes	- - - - -	*Brooks, W. S.	- - - - -	Valdosta.
Macon	- - - - -	Patten, J. M.	- - - - -	Oglethorpe.
Madison	- - - - -	Long, W. S.	- - - - -	Danielsville.
Meriwether	- - - - -	Rice, G. E.	- - - - -	Manchester.
Miller	- - - - -	Pinkston, J. O.	- - - - -	Colquitt.
Milton	- - - - -	Parker, J. L.	- - - - -	Alpharetta.
Mitchell	- - - - -	Patten, J. M.	- - - - -	Camilla.
Monroe	- - - - -	*McGee, E. P.	- - - - -	Forsyth.
Muscogee and	- - - - -		- - - - -	
Chattahoochee	- - - - -	*Jenkins, F. L.	- - - - -	Upatoie.
McDuffie	- - - - -	Clarke, W. W.	- - - - -	Thomson.
McIntosh	- - - - -	Arnold, J. L.	- - - - -	Darien.

\*Appointed in 1917-18.

<b>Murray</b>	- - - - -	*Irving, A. E.	- - - - -	Chatsworth.
<b>Newton</b>	- - - - -	*Bingham, H. W.	- - - - -	Covington.
<b>Ocone</b>	- - - - -	*Truitt, S. D.	- - - - -	Watkinsville.
<b>Oglethorpe</b>	- - - - -	Wiley, H. G.	- - - - -	Crawford.
<b>Pierce</b>	- - - - -	Wiley, T. B.	- - - - -	Blackshear.
<b>Pike</b>	- - - - -	*Foster, B. Fred	- - - - -	Zebulon.
<b>Polk</b>	- - - - -	*Garner, W. H.	- - - - -	Rockmart.
<b>Putnam</b>	- - - - -	*Gilstrap, L. C.	- - - - -	Eatonton.
<b>Randolph</b>	- - - - -	*Baldwin, J. C.	- - - - -	Cuthbert.
<b>Randolph</b>	- - - - -	*Patterson, G. W. (c.)	- - - - -	Cuthbert.
<b>Rabun</b>	- - - - -	*Arrendale, J. V.	- - - - -	Clayton.
<b>Rockdale</b>	- - - - -	*Blackwell, R. L.	- - - - -	Conyers.
<b>Richmond</b>	- - - - -	York, Gus	- - - - -	Hepzibah.
<b>Stephens</b>	- - - - -	*South, J. W.	- - - - -	Toccoa.
<b>Stewart</b>	- - - - -	*Childs, E. W.	- - - - -	Omaha.
<b>Sumter</b>	- - - - -	Marshall, G. E.	- - - - -	Americus.
<b>Sumter</b>	- - - - -	Stallworth, E. (col.)	- - - - -	Americus.
<b>Tatnall</b>	- - - - -	*Lucas, R. E.	- - - - -	Reidsville.
<b>Talbot</b>	- - - - -	*Lumsden, J. C.	- - - - -	Woodland.
<b>Terrell</b>	- - - - -	Allen, J. L.	- - - - -	Dawson.
<b>Thomas</b>	- - - - -	Culpepper, C. B.	- - - - -	Thomasville.
<b>Toombs</b>	- - - - -	Williford, T. Y.	- - - - -	Lyons.
<b>Towns</b>	- - - - -	Brown, W. S.	- - - - -	Hiawassee.
<b>Troup</b>	- - - - -	Acree, W. G.	- - - - -	LaGrange.
<b>Twiggs</b>	- - - - -	Hall, O. D.	- - - - -	Jeffersonville.
<b>Union</b>	- - - - -	*Stone, E. H.	- - - - -	Blairsville.
<b>Upson</b>	- - - - -	Odum, J. E.	- - - - -	Thomaston.
<b>Walker</b>	- - - - -	Veach, A. C.	- - - - -	LaFayette.
<b>Walton</b>	- - - - -	*LaBoon, Brardt	- - - - -	Monroe.
<b>Ware</b>	- - - - -	*Walker, L. C.	- - - - -	Waycross.
<b>Warren</b>	- - - - -	*Burns, W. S.	- - - - -	Warrenton.
<b>Wayne</b>	- - - - -	Shedd, I. P.	- - - - -	Jesup.
<b>Washington</b>	- - - - -	Sherrard, Sam H.	- - - - -	Sandersville.
<b>Whitfield</b>	- - - - -	Petree, R. R.	- - - - -	Dalton.
<b>Wilkes &amp; Lincoln</b>	- - - - -	Burdette, J. Luke	- - - - -	Washington.
<b>Wilcox</b>	- - - - -	Childs, W. S.	- - - - -	Rochelle.
<b>Wilkerson</b>	- - - - -	*Cliett, H. A.	- - - - -	Irwinton.
<b>Worth</b>	- - - - -	Sealy, J. R.	- - - - -	Sylvester.

#### Home Demonstration Agents

<b>Appling</b>	- - - - -	Parker, Miss Frankie	Baxley.
<b>Banks</b>	- - - - -	Turk, Miss Ruth	Homer.
<b>Barrow</b>	- - - - -	Sheats, Mrs. J. F.	Winder.
<b>Bartow</b>	- - - - -	Edwards, Miss Lula	Cartersville.
<b>Bibb</b>	- - - - -	Matthews, Miss Susan	Macon.
<b>Brooks</b>	- - - - -	Pedrick, Miss Cobbie	Quitman.
<b>Bulloch</b>	- - - - -	Harris, Miss Hortense	Statesboro.
<b>Burke</b>	- - - - -	Freeman, Miss B. W.	Waynesboro.
<b>Butts</b>	- - - - -	Butner, Mrs. Mary E.	Jackson.
<b>Candler</b>	- - - - -	Brown, Miss Lucile	Metter.
<b>Carroll</b>	- - - - -	Whatley, Mrs. V. D.	Carrollton.
<b>Chatham</b>	- - - - -	Carter, Miss Lois	Savannah.
<b>Chattahoochee</b>	- - - - -	Rushin, Mrs. Berta	Cusseta.
<b>Clarke</b>	- - - - -	Oliver, Miss Eldona	Bogart.
<b>Clay</b>	- - - - -	Shaw, Mrs. Eugene	Fort Gaines.
<b>Cobb</b>	- - - - -	Sawyer, Miss Ada	Marietta.
<b>Colquitt</b>	- - - - -	Henderson, Miss T.	Moultrie.
<b>Coweta</b>	- - - - -	Collins, Miss Lorine	Newnan.
<b>Crisp</b>	- - - - -	Hamilton, Miss Lou	Cordele.

\*Appointed in 1917-18.

Decatur	- - - - -	Matthews, Miss S.	- - -	Bainbridge.
DeKalb	- - - - -	Rivers, Miss Alice	- - -	Decatur.
Dodge	- - - - -	Morrison, Mrs. Mabel	- - -	Eastman.
Dooly	- - - - -	Wood, Miss Leta	- - -	Vienna.
Early	- - - - -	Weaver, Miss C.	- - -	Blakely.
Elbert	- - - - -	Cartee, Miss Lola	- - -	Elberton.
Emanuel	- - - - -	Morris, Miss Roberta	- - -	Swainsboro.
Evans	- - - - -	Thorpe, Mrs. L. V.	- - -	Claxton.
Fayette	- - - - -	Dickson, Miss Lela M.	- - -	Fayetteville.
Floyd	- - - - -	Farra, Miss Elizabeth	- - -	Rome.
Fulton	- - - - -	Shannon, Miss Floyd	- - -	Atlanta.
Glynn	- - - - -	Anderson, Miss Marie	- - -	Brunswick.
Gordon	- - - - -	Floyd, Miss Woffie	- - -	Calhoun.
Grady	- - - - -	Johnson, Miss Eliza	- - -	Cairo.
Greene	- - - - -	Williams, Miss Ruth	- - -	Greensboro.
Gwinnett	- - - - -	Green, Miss Sallie	- - -	Lawrenceville.
Habersham	- - - - -	Saunders, Miss E.	- - -	Clarkesville.
Haralson	- - - - -	Stone, Miss Mary J.	- - -	Tallapoosa.
Harris	- - - - -	White, Mrs. Hettie M.	- - -	Chipley.
Hart	- - - - -	Leard, Miss Lizzie	- - -	Hartwell.
Heard	- - - - -	Jeter, Mrs. Bessie C.	- - -	Franklin.
Houston	- - - - -	Brown, Miss Eliza	- - -	Grovania.
Irwin	- - - - -	Overby, Miss Mary	- - -	Ocilla.
Jackson	- - - - -	Collier, Miss Lurline	- - -	Jefferson.
Jasper	- - - - -	Phillips, Mrs. Ida	- - -	Monticello.
Jeff Davis	- - - - -	Latimer, Miss Sallie	- - -	Hazlehurst.
Jenkins	- - - - -	Cheatham, Miss May	- - -	Millen.
Johnson	- - - - -	Massey, Miss Clemmie	- - -	Wrightsville.
Laurens	- - - - -	Gilman, Miss Pearl	- - -	Dublin.
Lowndes	- - - - -	DeLoache, Miss F.	- - -	Valdosta.
Lumpkin	- - - - -	Moore, Miss Irene	- - -	Dahlonega.
McDuffie	- - - - -	McDonald, Miss Aline	- - -	Thomson.
Macon	- - - - -	Nelson, Miss Kate	- - -	Oglethorpe.
Madison	- - - - -	Greene, Miss Nellie	- - -	Danielsville.
Meriwether	- - - - -	Welchel, Miss Helen	- - -	Greenville.
Mitchell	- - - - -	Bradford, Miss A.	- - -	Camilla.
Montgomery	- - - - -	Bailey, Miss Maggie	- - -	Mount Vernon.
Muscogee	- - - - -	Fortson, Miss Jessie	- - -	Columbus.
Newton	- - - - -	Burge, Margaret	- - -	Covington.
Oconee	- - - - -	Saylor, Mrs. Nellie	- - -	Watkinsville.
Oglethorpe	- - - - -	McWhorter, Miss M.	- - -	Lexington.
Pierce	- - - - -	Wiley, Miss Annie	- - -	Blackshear.
Pike	- - - - -	Polhill, Miss Eliza	- - -	Zebulon.
Polk	- - - - -	Bailey, Miss Pauline	- - -	Cedartown.
Pulaski	- - - - -	Smith, Miss Sarah A.	- - -	Hawkinsville.
Rabun	- - - - -	York, Miss Maude	- - -	Clayton.
Randolph	- - - - -	Whittlesey, Miss M.	- - -	Cuthbert.
Richmond	- - - - -	Emerson, Miss Nora	- - -	Augusta.
Rockdale	- - - - -	Trimble, Miss Fannie	- - -	Conyers.
Screven	- - - - -	Merritt, Miss Madge	- - -	Sylvania.
Spalding	- - - - -	Sibley, Miss Myrtis	- - -	Griffin.
Stewart	- - - - -	Thompson, Miss Lyra	- - -	Lumpkin.
Sumter	- - - - -	Pond, Miss Rowena	- - -	Americus.
Taliferro	- - - - -	Wilson, Miss Clifford	- - -	Crawfordville.
Tatnall	- - - - -	Bethea, Miss Maggie	- - -	Reidsville.
Telfair	- - - - -	Houston, Miss Irene	- - -	McRae.
Terrell	- - - - -	Smith, Miss Ruth	- - -	Dawson.
Thomas	- - - - -	Forrest, Miss Lilla	- - -	Boston.
Tift	- - - - -	Bomar, Miss Willie	- - -	Tifton.

Towns	- - - - -	Brawner, Miss Addie	Hiawassee.
Troup	- - - - -	Lowrey, Miss Bessie	LaGrange.
Turner	- - - - -	Bass, Miss Julia	Ashburn.
Twiggs	- - - - -	Johnson, Mrs. V. H.	Jeffersonville.
Union	- - - - -	Phillips, Miss Zelia	Blairsville.
Walker	- - - - -	Hutcheson, Miss M.	LaFayette.
Walton	- - - - -	Ferguson, Miss Mary	Monroe.
Ware	- - - - -	Atwell, Mrs. T. B.	Waycross.
Washington	- - - - -	Brawner, Miss Ola	Sandersville.
Wayne	- - - - -	Bennett, Mrs. Annie	Jesup.
Webster	- - - - -	Schley, Miss Mortimer	Preston.
Whitfield	- - - - -	Strickland, Miss	
		Annie May	Dalton.
Wilcox	- - - - -	Thompson, Miss K.	Abbeville.
Wilkes	- - - - -	Davis, Miss Mabel	Washington.
Wilkinson	- - - - -	Sammons, Miss Ola	Irwin.
Worth	- - - - -	Wilson, Mrs. Jessie J.	Sylvester.

### Colored Demonstration Agents

Appling	- - - - -	Dickson, Ellen M.	Baxley.
Bartow	- - - - -	Andrews, Lucy G.	Cartersville.
Burke	- - - - -	Sumner, Mrs. Nora A.	Waynesboro.
Bulloch	- - - - -	Bryant, Mrs. Julia P.	Statesboro.
Brooks	- - - - -	Gaines, Lily I.	Quitman.
Coffee	- - - - -	Burnett, Madie B.	Douglas.
Elbert	- - - - -	Hayes, Mrs. Maggie M.	Elberton.
Emanuel	- - - - -	Tookes, Mrs. Fannie	Swainsboro.
Hart	- - - - -	Sherard, Sallie	Hartwell.
Houston	- - - - -	Dwight, Mrs. Osceola	Perry.
Jasper	- - - - -	Lee, Mamie A.	Monticello.
Jackson	- - - - -	Burns, Mattie	Jefferson.
Lowndes	- - - - -	Gaines, Deal V.	Valdosta.
Laurens	- - - - -	Lampkin, Effie M.	Dublin.
Macon	- - - - -	Jones, Mrs. Mary H.	Oglethorpe.
Mitchell	- - - - -	Cochran, Ethel	Camilla.
Morgan	- - - - -	Morris, Mrs. Eliza	Rutledge.
Pike	- - - - -	Burnette, Rosa E.	Barnesville.
Screven	- - - - -	Lanier, Mrs. Flora E.	Dover.
Spalding	- - - - -	Kelsey, Lena V.	Griffin.
Sumter	- - - - -	Jackson, Mrs. Addie L.	Americus.
Talbot	- - - - -	Everett, Mrs. Eloise	Talbotton.
Stewart	- - - - -	West, Mrs. Mary Lou	Lumpkin.
Tatnall	- - - - -	Fleming, Mrs. Lulia B.	Reidsville.
Tift	- - - - -	Burton, G. W.	Tifton.
Washington	- - - - -	Young, John L.	Sandersville.
Worth	- - - - -	Greene, Mrs. O. I.	Sylvester.
Wayne	- - - - -	Stafford, Mrs. Annie	Jesup.
Walton	- - - - -	Love, Rosa	Monroe.
Houston	- - - - -	O'Neal, Jennie C.	Fort Valley.
Chatham	- - - - -	Conyers, J. V.	Savannah.

### Agricultural Clubs

You will remember that club work was initiated in the United States with the establishment of the Boys' Corn Club by the University of Georgia in 1906. In 1910 the work was reorganized and expanded under the direction of the Georgia State College of Agriculture, and since that time has been growing steadily. Not only has its membership increased from year to year, but the type of



work done by the boys and girls has broadened in scope and importance until today it is one of the most far-reaching of all the classes of agricultural work within the state. Considerable impetus has been given to the movement this year by linking it with war work, and there is an earnestness and fervor in the work of the boys and girls that bespeaks conscientious and patriotic effort. Their slogan, "Every boy and girl will feed a soldier" is a very fitting one at this time.

The College of Agriculture fully appreciates the opportunity of giving leadership in this constructive work among Georgia boys and girls. In these young people it feels that it is training a new generation of farmers and farm women along broad and scientific lines, and that through them it is influencing fathers and mothers, even communities and entire counties. It is not so much that these club boys and girls produced last year \$801,570 worth of livestock and general farm crops, that they canned \$267,756 worth of surplus fruits and vegetables and that they won \$25,705 in prizes—though this is a worthy record—but the fact is that in training these boys and girls to be efficient producers the College is building for a better and more prosperous citizenry and one that will see in the farm a field worthy of its best efforts.

Though we can by no means measure the results of club work by enrollments and mere figures, still for your information I am presenting the record of club work accomplished in 1917:

#### Results of Club Work With Boys and Girls in 1917

Club	No. Enrolled	Product	Value of Products	Prizes Won
Corn	6,057	242,280 Bus. Corn.	\$484,560	\$6,420
Pig	4,559	4,540 Hogs	181,600	3,410
Calf	1,129	1,129 Calves	45,160	5,520
Four-Crop	284	Cotton, Corn, Oats, Peas	56,800	2,300
Miscellaneous	324	Peanuts, Velvet Beans, Etc.	16,200	
Canning	5,213	1,254,966 Containers	267,756	7,077
Poultry	1,050	47,00 Eggs set	17,250	1,348
Total	18,616		\$1,069,326	\$25,705

The records show that there were 18,616 boys and girls registering last year in corn, pig, canning, four-crop and miscellaneous clubs. This was the total enrollment for the year. On May 15, 1918 there had been registered 28,190 club members, an increase of fifty-two per cent. over last year, and by the time the records close the enrollment will have reached fully 45,000. The records show that on May 15th there were 7,312 members in the pig clubs, in the corn clubs 5,049, in the calf clubs 976, in the wheat clubs

643, in the poultry clubs 1,500, in the canning clubs 9,152, and in the miscellaneous clubs 378. In the pig corn, calf and pea clubs for negroes there is an enrollment of 3,180. The work which has been done by the clubs lately formed as the wheat club, sheep club and pea club is very encouraging. The wheat club promises to be one of the most popular clubs that we have begun.

Chart showing number of hogs in Georgia.

WHEN PIG CLUBS BEGAN IN 1914	
NUMBER OF HOGS TODAY	

Possibly the greatest interest this year is being shown in pig club work. The total enrollment for 1917 was 4,559 while on May 15th of this year it was 7,312 and the movement is gaining momentum every day. It is believed that by the close of the present year there will be one hog for every man, woman and child in the state, and Georgia already stands sixth among the hog producing states of the Union. The canning club work is also making good advances, the enrollment on May 15th being 76 per cent ahead of the total enrollment for last year.

Canning club work was organized in Georgia in 1911 and at that time only two counties were organized. Last year there were 56 counties with active clubs and this year through the aid of the war emergency appropriation of the government the work has been expanded until at the present time there are 96 counties with well organized clubs. Realizing that in club work lies their greatest opportunity for real war service, the girls of the state are nobly responding and before the year is over fully fifteen thousand will be actively engaged in canning, drying and brining the surplus fruits and vegetables that are so abundant on all well organized farms. Last year they filled 1,254,966 containers and the total value of the product was approximately \$267,756. The 4-H brand has been so well established that it is now a standard one and the strong demands for the product give recognition of its quality and excellence. The 4-H means training the head to think, to plan, to reason; training the hands to be useful, helpful, skillful; training the heart to be kind, true, sympathetic; and training the health so that the individual may be able to resist disease, enjoy life and be efficient. The girls are also active in poultry work, setting last year 47,000 eggs and raising \$17,250 worth of well bred chickens.

The champion corn club boy was Houston Pullen of Clem, raising 154 bushels of corn on an acre at the low cost of thirty cents per bushel. The four-crop champion was Stonewall Dyer of Newnan. This young man raised 75 bushels of corn on an acre at a profit of \$131.64; 1,879 pounds of seed cotton at a profit of \$237.20; and 4,267 pounds of hay at a profit of \$46.50. Thus, his total

profits on three acres were \$415.34 and well repaid him for the time that he gave these crops. Goode Carr of Calvary won first prize in the pig clubs with a registered Poland China weighing three hundred pounds. He paid five dollars for the pig when he bought it and five months later it was valued at \$250. by his county agent.

The most noteworthy development of the club work is the Short Course held at the College during the summer. The results of the meeting held last summer, at which 270 boys and girls were present, has already been given in another section of this report. The meeting this year will be held in August.

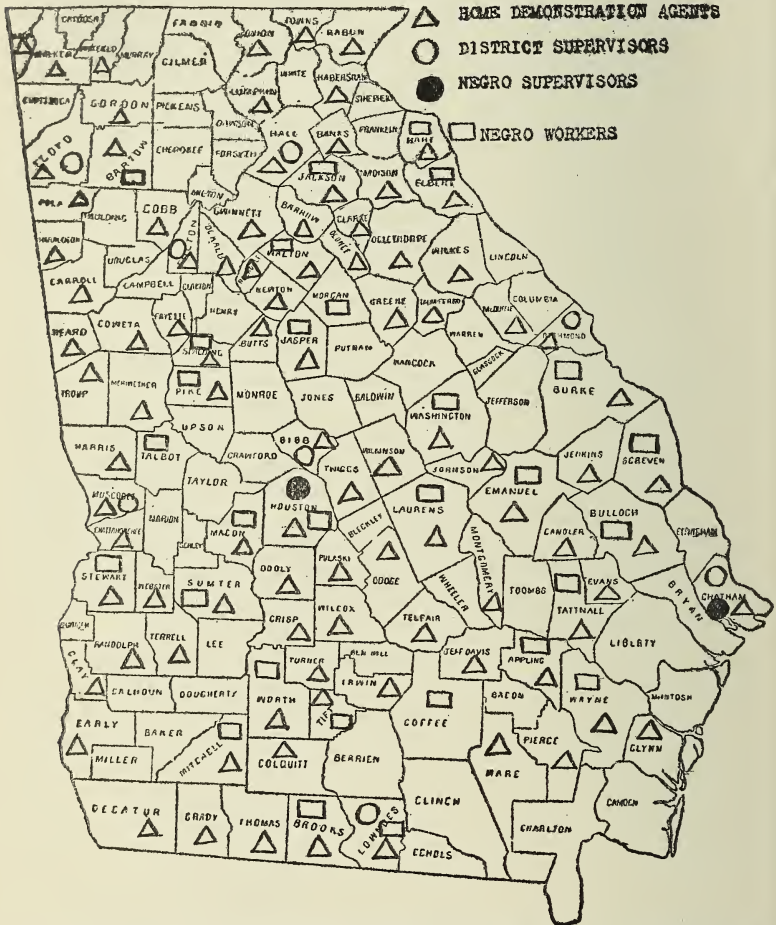
The schools of the state have given good cooperation and service is helping to carry out the different lines of club work. As yet our teachers have not fully appreciated the value of agricultural education and what it may mean in helping to bring the school and the home closer together. Our teachers should be taught to place before the young people in the school-room the fundamental principles of agriculture and domestic science in such an attractive manner that the boy and girl will be encouraged to stay on the farm. This can only be done when we have taught them the best methods of an efficient and scientific agriculture. The courses in agriculture in the University Summer School are giving our teachers, in a measure, the agricultural view point, but it would greatly facilitate our work could there be inaugurated special courses of agriculture of from one to three months' duration for teachers of secondary agriculture. This might be made a part of the Summer School work. With the establishment of schools of vocational agriculture in every county and with thoroughly trained agricultural teachers in these schools, we shall be able to more closely coordinate club activities with the classroom by giving direct instruction in agriculture leading to club work.

Among the most interested observers and contestants at the county and state fairs last fall were the club boys and girls. Here they placed 1500 exhibits of their prize corn, calves, pigs and poultry, winning thousands of dollars in prizes and premiums as rewards for their excellent work through the year. A Fair School for boys was held under the auspices of the College of Agriculture at the Southeastern Fair in Atlanta, at which two boys from every county in the state were present. A Fair School for the girls was held in Macon at the State Fair, and they were given demonstrations in cooking, canning, drying, butter making and food conservation.

In addition to the boys' and girls' club work 5,400 women were working last year under the demonstration agents of the College, as shown in another section of this report. There were also 5,375 adult farmers working actively in clubs and doing community service of the highest type.

## Home Building Activities

In 1917 five thousand four hundred women were enrolled for definite work under the direction of fifty-seven county home demonstration agents in as many counties. For 1918 the enrollment at the present time is 10,496 women. Doubtless this number will be materially increased as the work is being conducted in ninety-six counties, each county being well organized and under the direction



Cut shows location of district supervisors, home demonstration agents, negro supervisors, and negro workers.

of a county agent. These women are carrying on demonstrations along the following lines: gardening, poultry raising, butter-making, making of cottage cheese, canning, drying, brining, storing of vegetables and fruits, curing of meats, cookery of food, remodel-



ing of colthing, improvement of sanitary conditions, and the building and operating of labor saving devices and home conveniences. The women are organized into community clubs which meet regularly for the purpose of studying their individual and local problems. One of the most interesting phases of the work is shown by the organization of food study classes at which food values and the theory of the cookery of foods are studied, following a demonstration in the cookery of that particular type which is being considered at the time.

Increased interest is shown this year in gardening. Thousands of women are growing large plots of soy beans, peanuts and other legumes to be used as substitutes for meat and wheat. Many homes have perennial gardens for the first time, the products grown being principally grapes, asparagus, figs, and berries. These same women are concentrating their attention upon the raising of poultry, giving more time and thought to the selection, better breeding, feeding and housing of birds with the result that the farm flocks are in many instances for the first time paying dividends. As a result of increased egg production the club women are being taught the grading and packing of eggs, and how to preserve them for winter use. For the coming year there will be a woman assistant who will have direct charge of poultry work with women.

Butter manufactured by women working under agents increased fifty per cent in price during the last year, due largely to the fact that women on the farms are making a better product than ever before. In an effort to eliminate waste and create wholesome substitutes our club women are given lessons in the making and utilization of cottage cheese, this work being carried on under the direction of a specialist in cheese making. In a number of counties cottage cheese is being used as a substitute for meat on the large plantations where there are many negroes employed, while in other counties the women and girls are marketing their cottage cheese in the nearby towns, sending the product by parcels post. This cheese is being made from the skim milk which the farmers formerly fed to the calves and pigs.

In a few counties notable results have been accomplished through the establishment of curb markets, the girls and women bringing the products, which they have for sale, to the town where they are met by the women who purchase their commodities. This has created a desire for the products sold in this way, and has in turn stimulated production.

Very gratifying indeed have been the results of the work with wheat flour substitutes in the matter of bread making. In a number of places food conservation exhibits have been held and recipes given for the dishes exhibited. This has probably done more than any other one thing toward making these substitutes popular. It is not unusual when addressing an audience of women on the sub-

ject of food production and conservation to find women who have pledged themselves to eat no wheat at all until the next harvest and always the vast majority of the women present declare they are observing wheatless days. This means that they have learned to make many kinds of bread other than plain corn bread.

Labor saving devices, such as fireless cookers, iceless refrigerators, wheel trays, fly traps, ironing boards, butter making equipment, sewing screens, and devices for drying fruits and vegetables have been installed in many homes. The fact that due to war conditions woman's sphere has been enlarged with a consequent increase in her duties has tended to promote her interest in the building and operating of these devices which save her time and strength.

One of the greatest drawbacks to rural life is the isolation of the people and the lack of social intercourse. These women demonstrators are therefore organized into community clubs which meet at regular intervals at the homes of the members. Often entertainments are given for the purpose of making money with which to improve the school or church or buy some piece of equipment for the club. In this way the county agent is able to give the instructions which she wants these women to have without making visits to each individual home. The following quotations from agents' reports give in an interesting way some of the things accomplished at such meetings:

"On January 19th, I attended a very interesting club meeting at Epworth School. A number of the patrons at this school are dairymen (on a small scale) and are preparing for the boll weevil by keeping cows and gardening for market. These people are receptive and are easily led and we hope to get fine results the coming year through this club. At our last meeting we discussed 'The prevention of Contagious Diseases in the Rural School.' The discussion brought out some fine papers on sanitation, the prevention of flies and the importance of screening against them, use of individual drinking cups, and better school lunches." Those who are familiar with the rural schools of the state will realize how much it will mean to have the women of the community center their interest and activity on its development.

One of the newest phases of the club work this year has been the urban work with city women. While demonstration agents are helping the country women, definite demonstrations are now being carried on by the women in nine of Georgia's largest cities under the direction of special urban workers. In most of these cities demonstration kitchens are being established and these are equipped so that the work in food study, canning, drying, and other important subjects may be carried on at central places. Food exhibits are being held and everything possible is being done to conserve the essentials. In one of these towns a thousand boys and girls are

cultivating gardens, the work being supervised by the school teachers working in cooperation with the urban agent.

In every one of these cities the people of the mill sections are being taught food conversation, cookery of foods, and their proper combination in the diet.

In response to the urgent appeal of the farm women of Georgia, a short course similar to those provided for the boys, girls, and men, was held in January. Twenty-five women were in attendance and the increased demand is such that another will be held in August in connection with the girls' short course.

The work with negro women is growing as rapidly as funds will permit. There are now employed twenty-nine negro women in charge of the work in as many counties besides two negro supervisors. The county home demonstration agent supervises the work of the negro county agent and advises her as to the type of the work to be undertaken.

The following excerpts from negro county agents' reports will prove interesting:

"On Monday I visited the members of the poultry club at Wymton; took with me a spray pump and demonstrated the effectiveness of spraying coops and poultry houses against parasites; talked about well balanced rations for chicks, use of buttermilk and dry mash, and emphasized value of plenty of fresh water."

"In each community where there are poultry club members, I gave a practical demonstration at the home of some club member. I taught them to cull the flock and select those that would make good winter layers."

"I have held three club meetings this week besides the extra individual work with the girls. I am trying to get those girls that live a long from any club center to visit the nearest club sometimes. They are delighted to come when they can but they have to work. Saturday I had a big club meeting and the girls five miles away came.

I have had some trouble trying to get the cans ordered. We did not need a car load in this county and I failed to get the adjoining counties of North Carolina to cooperate with me in this matter. It is a big undertaking to get anything from the railroad since the distance is about thirty miles over a very rough mountain road. We have the cans ordered now in crates. The girls are clamoring for them, and if we should fail to get them, I guess I would have to leave the county. The county bank guaranteed the payment and the girls are giving their notes where the father fails to furnish the money. I am pleased that the girls are responding to anything that I ask of them."

"Week closing June 30th, I visited twenty-one club members, nine home demonstrators and four schools, held five meetings with attendance of 250; traveled 115 miles by auto and 28 miles in

buggy; held 50 consultations at home and office, wrote 20 letters; and sent out 150 circular letters and 100 bulletins."

In every case the negroes are responding to our training and they are making great strides in learning the fundamental household arts. We are teaching them only those things that will enable them to live better and more comfortably, and to do in the most efficient manner the duties and responsibilities that relate to their sphere in life. We consider this invaluable work for the state when we raise the educational status of the negroes and teach them to be producers rather than consumers.

A partial summary of the work accomplished during 1917 by all the home demonstration agents is presented herewith:

Dried fruit and vegetables stored (pound)-----	59,035
Vegetables brined (gallons)-----	38,761
Total value of dried, brined and canned products-----	\$665,566.90
Value of poultry products raised by women-----	\$ 16,339.85
Total value gardens -----	\$923,823.50
Fireless cookers built-----	509
Iceless refrigerators built-----	219
Fly traps built-----	501
Ironing boards constructed-----	170
Wheel trays constructed-----	60
Houses screened by women-----	544
Kitchen cabinets constructed-----	24
Miscellaneous devices -----	157
Water systems installed-----	24
Labor saving devices made-----	2,229
Girls enrolled in clubs-----	6,263
Women enrolled in clubs-----	5,400

### MEETINGS ORGANIZED BY THE COLLEGE

From every section of the state have come calls for the College to send its men and women out to speak to the people, and these requests have been responded to in every case possible. The College has also taken the initiative in organizing hundreds of farmers' institutes, extension schools, general extension meetings and club gatherings. While the extension force has led in this work every man associated with the College has participated in some of these meetings. There has been a constructive theme running through every series and the results that have been accomplished will be gathered from the reports of the several divisions. The nature and the character of this service work is aptly illustrated in the following digest:



## MEETINGS ORGANIZED IN 1917

Kind of Meeting	Number	Miles traveled	Estimated Attendance
Extension Schools -----	8	2,426	9,600
Farmers' Institutes -----	104	17,911	14,294
Dairy Extension -----	144	33,000	8,400
Livestock Meetings -----	107	32,820	8,053
Poultry Club Meetings -----	120	14,800	1,120
Marketing Meetings -----	26	16,995	2,350
Agronomy -----	385	28,680	14,400
Livestock Disease -----	62	5,190	3,539
Agricultural Engineering -----	144	95,000	7,680
Horticultural Meetings -----	33	36,599	2,775
Plant Pathology and Forestry -----	214	194,410	14,077
Pig Club Meetings -----	251	24,454	14,126
Corn Club Demonstrations -----	72	11,486	12,450
Canning Club Demonstrations -----	560	67,200	18,000
Educational Exhibits—Fair -----	3	3,150	110,000
Total -----	2,233	584,112	240,864

You will notice in the above report that 2,233 well organized meetings were held during the year and that they were attended by approximately 240,864 people. Our representatives traveled 584,112 miles in attendance upon these meetings, and the mileage in a measure represents the response that our men made to the request of the Georgia farmer for information in those phases of farming with which he was unfamiliar. The facts which have been discovered by the experiment stations all over our country and the information which has been hid away in bureaus and libraries is thus brought to the attention of the farmer in such a manner that it is easily understood. This new type of education is giving wonderful results in waking up the people and, in keeping with the thought of the times, it is the epitome of democracy in education.

## WORK OF COUNTY AGENTS

For the first time in the history of extension work every county in the state has the services of a county agent, a few special agents serving in several counties. At the present time there are employed in the extension work of the College 113 county agents and 35 district agents and specialists. A number of our young men resigned to go into army service, to go to farming and to take up more lucrative lines of agricultural work. To enter military service 33 county agents, district agents and specialists asked for indefinite leave of absence. These were granted and naturally the work was carried on in some sections somewhat disjointedly for a time.

Extension work, as you know, is maintained out of Smith-Lever funds, derived from State and Federal appropriations, offsets being made by the counties and through indirect congressional appropria-

tions. The funds assigned to Georgia in war emergency work total \$107,000 and this has made possible extended efforts in the production and conservation of food and feed products. Close cooperation has been maintained with all State and Federal agencies and the record which has been made shows the soundness of the principles on which county-agents work is based. The character of the service rendered by our agents has been improving and it is with regret that we have lost this year some of the best men in the service, the reasons for which have already been given.

The county agents assembled at the College during January and at that time plans were made for the years work. Agents recently inducted into the service were given a specialized course for two weeks bearing directly upon the work they were to do, and so at the present time practically every county agent has had some training at the Georgia State College of Agriculture. In this way a splendid unity of organization has been secured.

In order to show you the varied and exacting duties the county agent is called upon to perform, I shall give you the record of the work of a county agent as reported to me. The agent was called from his bed at four o'clock in the morning of December 7, 1917 to go five miles into the country for the purpose of making an examination of a hog that had died suddenly. After making this call he was requested by a neighboring farmer to help drench a mule that was suffering with cholic, and this he did. On his way back to town he was stopped by a farmer who wanted to know what particular grade of fertilizer he should use on his land and seemed rather surprised when the agent could not tell him the chemical analysis of the soil, though it takes an expert chemist several days in a special laboratory to make such an analysis. On his return to the office these questions were asked of the agent, "Can I successfully grow a crop of Irish potatoes followed by sweet potatoes? If so, when must I plant the Irish potatoes and what kind of fertilizer must I use? How much will the application of fertilizer cost me per acre and when must it be applied? Will the sweet potatoes need any extra fertilization?"

This same agent went by the market later in the day to purchase some beef and these questions were asked him by his butcher who had a number of hogs in cold storage and wanted to give them the sugar-cure treatment. "How long must I let this meat remain in cold storage? What is the proper recipe for making the sugar-cure preparation and how long should I let the meat remain in cold storage before I apply the preparation?" Then to finish the day's work he received the following requests from the College of Agriculture and the United States Department of Agriculture in the evening mail. "Please supply us with a labor survey of your county. Send list of those who buy and sell hogs in your county. Please report to us on the advisability of putting on a demonstration of

Satsuma orrange work in your county." This is the actual work laid before a county agent in one day. I grant you that it is out of the ordinary but it will give you some idea at least of the many varied kinds of service work the county agent is called upon to perform.

The duties of the county agent are usually divided into two classes. First he is expected to carry on with a number of farmers, whom we term "cooperators," specific and definite lines of farm work in general farm crops as to the best methods of planting, fertilizing, cultivating, harvesting and marketing. In south Georgia where the boll weevil was present these demonstrations with cotton were of inestimatable value for it gave the agent the opportunity to carry home the lessons of good seed for earliness, thorough fertilization and cultivation, and finally the plowing under of the stalks as early in the season as possible.

Records of demonstrations in general farm crops and of miscellaneous demonstrations are given here for your information:

#### Demonstrations in General Farm Crops

Crop	Demonstrations	Acres Planted	Average Yield
Corn	5,825	55,158	35 Bus.
Cotton	5,825	87,790	1,100 Pounds
Oats	4,038	25,100	26 Bus.
Wheat	3,735	19,000	11 Bus.
Alfalfa	885	2,639	2 Tons
Velvet beans	12,070	106,610	14 Bus.
Tobacco	375	1,500	
Peanuts	1,650	24,750	46½ Bus.
	<u>34,403</u>	<u>322,547</u>	

#### Miscellaneous Demonstrations

Kind of Demonstrations	Number
Hog grazing -----	3,180
Pasture (Annual and perennial) -----	590
Beef feeding -----	80
Meat curing -----	1,003
Poultry and egg production -----	1,353
Orchard pruning -----	1,000
Orchard spraying -----	1,667
Truck crop -----	510
Rotation and soil improvement -----	750
Miscellaneous demonstrations -----	<u>10,133</u>
General farm crop demonstrations -----	<u>34,403</u>
Total number of demonstrations -----	<u>44,536</u>

You will notice in the foregoing that our agents have carried out 34,403 demonstrations in general farm crops on 322,547 acres. The average yield in corn was 35 bushels per acre, in cotton 1,100 pounds of seed cotton, in oats 26 bushels per acre, in wheat 11 bushels, in alfalfa 2 tons, in velvet beans 14 bushels and in peanuts 46½ bushels. All of these yields are indeed satisfactory for average demonstrations.

In the miscellaneous demonstrations you will notice that a great deal of attention is being paid to the growing livestock interests of the state. Eighty beef feeding experiments were held, 3,740 demonstrations in hog grazing and pasture work, and 1,003 demonstrations in the proper curing of meat. In orchard work special attention was given to conservation as accomplished through the spraying and pruning of trees. The total number of all demonstrations held with farmers was 44,536. These demonstrations were of great value not only to the farmers themselves, but to the communities in which they were carried out. The educational value of such service should not be too lightly passed over.

In addition to the many demonstrations, the agents were called on to perform other kinds of work which are here partially summarized:

#### General Service Work of County Agents

Horses, cattle, hogs and sheep bought for owners-----	13,874
Hogs treated for cholera-----	129,933
Cattle treated for disease-----	4,444
Beef and dairy herds started-----	164
Silos and dipping vats constructed-----	686
Cream routes started-----	42
Number of acres drained-----	21,150
Visits made by agents to farmers-----	33,899
Letters written by agents-----	52,937
Number of farmers advised as to intelligent use of commercial fertilizer-----	9,500
Number of tons of lime bought through agent's efforts----	9,400
Bulletins and circulars distributed by agents-----	123,316
Newspaper articles written-----	1,370
Number of miles traveled by agents-----	954,286

As is shown in another section of this report there are but thirty-seven counties in Georgia that have the services of a graduate veterinarian and with this state of affairs how can the cattle, hogs, sheep, horses, and mules of Georgia, valued last year at \$159,000,000, be properly taken care of? The county agents were called on to help relieve this serious situation and in answer to that call they treated 4,444 cattle for disease and inoculated 129,933 hogs for cholera. As to other constructive livestock work they bought for farmer owners 13,874 well bred horses, cattle, hogs and sheep, started 164 beef and dairy herds, organized 42 cream routes and supervised the construction of 686 silos and dipping vats.

In fertilizer work the agents advised with 9,500 farmers as to the intelligent use of fertilizers and through their direct influence 9,400 tons of lime were used in constructive soil building. Mention should be made here of the great service rendered the national Government when the agents took orders from Georgia farmers for 50,000 tons of nitrate of soda, arranged for its payment through local banks and aided the Bureau of Markets in getting all that arrived properly distributed. Much of the nitrate is still to come and the county agent will be depended upon to handle the matter.



One of the greatest aids to the work of the county agent and the home demonstration agent has been the appointment of an advisory agricultural board in each county. With an efficient organization of this kind composed of farmers and business men, all agricultural work in a county will be coordinated and better results may be expected in the future.

The second specific kind of work falling to the county agent is the giving of information through the school, farmers' meetings, the organization of community clubs, by letter or telephone, by the distribution of bulletins, and through timely articles to the press. A more thorough coordination of effort along this line during the last year has enabled the county agent to reach and aid a larger percent of the farming population than has been possible in the past.

A fruitful line of endeavor for the county agents has been their work with the school, and with the boys and girls. Under their direction last year 13,724 young people, nearly all boys, produced \$784,320 worth of hogs, calves, corn, cotton and general farm crops. This type of education which teaches the boy and the girl to be a producer, is of the highest merit for it is bringing to their attention the real problems of life and giving them a deeper appreciation of the training which they are receiving in the school and in the home. The effect, which the constructive work of the county agent is having on the educational status and efficiency of the common school boy and girl, cannot be measured in dollars and cents.

A special work for agents last fall in sections infected by the boll weevil was the campaign of stalk destruction. Three specialists in cooperation with the county agents were instrumental in having stalks destroyed by 4,500 farmers as early before frost as possible. These areas will serve as examples and this year around them will be worked out stalk destruction for entire communities. This spring our agents have been working assiduously to persuade the farmers that the continued cold weather of the last winter has not killed all the weevils and that a large amount of infestation may be expected if the weather is favorable to the growth of the weevil. In spite of the warning of the agents, however, there has been planted in some sections of south Georgia large areas of cotton. The cotton is now being plowed up and other crops are taking its place.

#### Marketing

Notable advance has been made in educational work in marketing in the last twelve months. The work done by the College in marketing is carried on in cooperation with the United States Bureau of Markets.

During the cantaloupe season of last year daily news service was furnished to over 600 growers and dealers in the state and in addition to this, the College was instrumental in securing news service for a great number of peach and melon growers in Georgia and adjoining states.

A great deal of educational work has been carried on through extension schools, cooperative organizations, fairs, press articles, and public meetings. Thousands of growers have been furnished grade specifications for their commodities.

Working in cooperation with the county agents in the principal hog producing sections of the state, our specialist in marketing has organized a number of cooperative livestock selling associations. Through these organizations the producers have been able to realize a much better price for their livestock. These organizations have done much to develop quality of product and to encourage cooperative dealing among the farmers.

Assistance has been given in the organization and operation of cooperative organizations for the handling of perishable products and several of these organizations sold produce to the value of \$100,000 last year.

The campaign which was started last summer to introduce the southern grown sweet potato North has been continued this year and several commercial organizations have given their cooperation on this project. The results have been good. The campaign to encourage the construction of sweet potato storage houses was very successful.

Rather intensive investigations were made with reference to the methods of marketing velvet beans and peanuts. Local organizations and business men were encouraged to put in feed mills and warehouses for the handling of velvet beans. During the year a great number of farmers and mill people have been given assistance in marketing velvet beans and peanuts outside of the state.

A County Agents' Exchange was instituted, through which the agents were able to secure and dispose of seed, breeding stock, and other commodities for their farmers.

The marketing of the early crop of Irish potatoes of last season presented a rather difficult problem. So definite information as to methods of handling the crop was furnished practically every grower in the state.

In dealing with the market problems we have endeavored to stress the educational side of the work and through the hundreds of personal calls which our agent has made to individuals asking assistance, men have been trained who will give invaluable assistance to the farmers of their respective communities in the proper methods of marketing special products. The increased production and use of perishable foodstuffs and the educational propaganda for the elimination of waste have done much to focus the attention of the people on efficient methods of marketing.

### Special Meetings

One hundred and four institutes were held during the last year with a total attendance of 14,294, making an average attendance of 137 1-2 per institute. Institutes were held at Baxley, Appling

County; Alma, Bacon County; Cartersville, Bartow County; Winder, Barrow County; Homer, Banks County; Cochran, Bleckly County; Fitzgerald, Ben Hill County; Macon, Bibb County; Quitman, Brooks County; Indian Springs, Butts County; Waynesboro, Burke County; Kingsland, Camden County; Fairburn, Campbell County; Roopville, Carroll County; Savannah, Chatham County; Summerville, Chattooga County; Cussetta, Chattahoochee County; Ft. Gaines, Clay County; Newnan, Coweta County; Appling, Columbia County; Cordele, Crisp county:

Douglas, Coffee County; Rising Fawn, Dade County; Dawsonville, Dawson County; Bainbridge, Decatur County; Eastman, Dodge County; Pinehurst, Dooly County; Albany, Dougherty County; Guyton, Effingham County; Elberton, Elbert County; Swainsboro, Emanuel County; Blakely, Early County; Fayetteville, Fayette County; Rome, Floyd County; Cumming, Forsyth County; Cross Roads, Fulton County; Brunswick, Glynn County; Calhoun, Gordon County; Cairo, Grady County; Greensboro, Greene County; Lawrenceville, Gwinnett County; Clarkesville, Habersham County; Gainesville, Hall County; Sparta, Hancock County; Hamilton, Harris County; Steadman, Haralson County; Hartwell, Hart County; Franklin, Heard County; McDonough, Henry County; Perry, Houston County; Ocilla, Irwin County; Monticello, Jasper County; Commerce, Jackson County; Hazelhurst, Jeff Davis County; Louisville, Jefferson County; Millen, Jenkins County; Grays, Jones County; Dublin, Laurens County; Hinesville, Liberty County.

Valdosta, Lowndes County; Danielsville, Madison County; Thomson, McDuffie County; Greenville, Meriwether County; Buena Vista, Marion County; Darien, McIntosh County; Colquitt, Miller County; Camilla, Mitchell County; Gentian, Muscogee County; Watkinsville, Oconee County; Lexington, Oglethorpe County; Dallas, Paulding County; Zebulon, Pike County; Cedartown, Polk County; Hawkinsville, Pulaski County; Eatonton, Putnam County; Clayton, Rabun County; Cuthbert, Randolph County; Conyers, Rockdale County; Sylvania, Screven County; Eastanolle, Stephens County; Lumpkin, Stewart County; Americus, Sumter County; Talbotton, Talbot County; Reidsville, Tattnall County; Yoemans, Terrell County; Tifton, Tift County; Lyons, Toombs County; Hiawasse, Towns County; LaGrange, Troupe County; Jeffersonville, Twiggs County; Ashburn, Turner County; Thomaston, Upson County; Blairsville, Union County; Flintstone, Walker County; Monroe, Walton County; Waycross, Ware County; Warrenton, Warren County; Sandersville, Washington County; Jesup, Wayne County; Dalton, Whitfield County; Preston, Webster County; Washington, Wilkes County and Rochelle, Wilcox County. The usual interest on the part of the public was shown in these meetings.

The extraordinary feature of these institutes was the manner in which they were conducted. Eight groups of institute lecturers



completed the institute work in three consecutive weeks, from July 24th to August 11th inclusive. This reflects the thorough cooperation given by the College Staff in this work, as all of the lecture work was done by the members of the staff.

The College installed and maintained at the Georgia State Fair, Macon, Ga., Oct. 30th to Nov. 9th, 1917, the largest educational exhibit in the history of the institution. This exhibit covered 2,500 feet of floor space and represented new phases of all the subjects taught by the various departments of the State College of Agriculture, particular emphasis being laid on the production and conservation of food stuffs. Special demonstrations were conducted each day of the fair, instruction being given in the use of substitutes for meat, sugar, fats and wheat. A demonstration was also given in the manufacture of cottage cheese for home consumption. Many favorable comments were passed upon this exhibit both by the press and the public. Unquestionably it was one of the best food conservation exhibits ever put on anywhere and its value in the furtherance of the efforts of the Food Administration is inestimable.

### Editorial Department

Editorial work in the field of agriculture, especially as it deals with the preparation of bulletins and of news articles for daily and weekly newspapers, is distinctly a new calling and one for which few as yet have properly prepared. It requires not only newspaper experiences but also the necessary technical information for editing agricultural material. The high standard set by this department in past has been maintained during the year.

It will be noticed in the report on publications that no bulletin or circular had a greater circulation than twenty thousand, and that the average circulation was approximately five thousand. With the present force of county agents and demonstration agents in the field it would be a comparatively easy matter to effectively distribute maximum editions of from fifty to sixty thousand bulletins and average editions of twenty-five thousand. It seems that it will take three to five times the available printing fund to adequately supply the needs of the state for agricultural information.

The daily and weekly press of the state have given most excellent cooperation in carrying agricultural news and information to the farmers. To them has been furnished each week one column of agricultural material in plate form and by this means we have been able to reach approximately the entire citizenry of the state. Especial attention has been given to war-time information. Articles on food administration work, food production and food conservation have been kept before the people at all times.

For the boys and girls in club work there have been repared five types of record books in which to record the results of their work



for the year. The total number of these record books published was 40,000. In addition to this a letter of information and instruction was sent monthly to 1,500 poultry club members.

The poster has been used with telling effect by the county agent in calling the attention of the public quickly to a special kind of work. By this means the seriousness of the wheat situation was last fall brought immediately to the attention of the people with an urgent request that each family grow at least enough to supply its own needs. The poster, "WOOD May Replace COAL" did a great deal to impress upon the people the seriousness of the fuel situation and the urgent necessity of cutting more wood. "Plant a War Garden" proved of great service in the garden campaign this spring.

### Publications

The agricultural publications written, edited and issued by the College of Agriculture are growing in importance every year and are proving themselves to be effective carriers of genral and technical agricultural information to the farmers of the state. They are placed in the hands of the farmer by the county agent and in this way the most profitable distribution is secured. The publication is given to the man who needs it and the personal touch that the county agent gives in the distribution materially increases its use and efficiency.

There have been printed forty-seven bulletins and circulars containing 1100 pages. This represents an increase of twenty-nine per cent over the amount of material prepared for distribution last year. There were 263,000 editions printed containing a total of 4,642,000 pages. All of the publications were exceptionally well printed and compare most favorably with those of other agricultural institutions.

The title, the edition, the pages per copy and the total number of pages for each of the publications issued during the year follow:

#### Bulletins and Circulars

Home Canning of Fruits and Vegetables-----	20,000	40	800,000
Analyses of Soil of Polk County-----	2,000	56	112,000
Annual Report of President-----	1,000	76	76,000
Marketing Farm Woodland Products-----	5,000	32	160,000
How to Make Good Butter-----	5,000	12	60,000
Songs for Girls Clubs-----	5,000	16	80,000
Pecan Growing in Georgia-----	5,000	24	120,000
Proceedings of Farmers' Conferences-----	1,000	164	164,000
Report of District Agricultural Schools----	1,000	24	24,000
Annual Extension Report-----	1,000	68	68,000
Apple Culture in Georgia-----	5,000	36	180,000
Wheat and Rye Production in Georgia----	10,000	16	160,000
Common Parasites of Farm Animals-----	3,000	40	120,000
Winter Short Courses-----	7,500	20	150,000
Analyses of Soils of Jackson County-----	2,000	24	48,000
Growing Sweet Potatoes in Georgia-----	10,000	24	240,000
Report of Extension Schools-----	1,000	24	24,000

Every-Man's Silo .....	5,000	16	80,000
Measuring Woodland Products.....	5,000	16	80,000
Growing Tomatoes in Georgia.....	5,000	16	80,000
Grazing Crops for Hogs.....	10,000	16	160,000
Varieties of Corn and Their Utilization....	5,000	16	80,000
Vegetable Gardening in Georgia.....	15,000	28	420,000
Announcement of the Veterinary Course....	1,500	16	24,000
Announcement of Home Economics Course....	1,500	16	24,000
Announcement of All Courses 1918-19....	2,500	140	350,000
Home Drying of Fruits and Vegetables.....	10,000	8	80,000
Feeding Garbage to Hogs.....	1,000	8	8,000
Production of Fall Pigs.....	5,000	4	20,000
Winter Killing of Fruit and Nut Trees.....	2,500	4	10,000
Grow Irish Potatoes in Georgia.....	5,000	4	20,000
Spray Calendar for Georgia.....	5,000	8	40,000
Starve the Boll Weevil.....	10,000	4	40,000
Seed Corn Selection.....	5,000	8	40,000
Handling Small Sweet Potato Crop.....	10,000	4	40,000
Prolonging Life of Farm Timbers.....	5,000	8	40,000
Growing Basket Willow.....	1,000	8	8,000
Georgia Industries Using Farm Woodland Products .....	1,000	8	8,000
Cereal Diseases and Their Control.....	5,000	4	20,000
Agricultural Club Guide.....	15,000	12	180,000
Vegetable Planting Table.....	20,000	4	80,000
Satsuma Orange .....	2,000	4	8,000
Farm Tractors for Georgia.....	3,000	8	24,000
Short Course for Farm Women.....	2,000	4	8,000
Oil Content of Cotton Seed as Influenced by Variety and Selection .....	10,000	4	40,000
Cotton Variety Tests .....	10,000	4	40,000
War Emergency Course in Vocational Agri....	1,000	4	4,000
Grand Total .....	263,500	1100	4,642,000

### Posters

Starve The Boll Weevil.....	10,000
Sow Wheat Sow.....	5,000
Kill Corn Weevil.....	5,000
Build Meat Curing House.....	3,000
Build Gambrel Roof Barn.....	3,000
Prevent Hog Cholera.....	5,000
Farmers' Short Course.....	5,000
Wood May Replace Coal.....	5,000
Get A War Garden Going.....	5,000
Total number of posters issued.....	46,000

### Library

The library has been reorganized during the last year on a very efficient basis and we now have all of our books, bulletins and other publications filed and indexed under the latest approved methods. According to the accession book the total number of volumes now in the library is 3,394. Substantial additions have been made to the bulletin list, 2,182 bulletins having been received from colleges, experiment stations and the United States Department of Agriculture.

A great deal of bibliographical material has been prepared dur-

ing the year and is now on file in the library. The subjects covered are: vocational farming, clothing, community problems, cookery, extension work in rural communities, food conservation, fuel value of foods, household management, lespedeza, lime, markets and pure food, bacteriology of milk, milk as a food, organic matter and humus, poultry project work, the rural home and vocational education. Subject matter for the following debate subjects has been prepared: Resolved, that the United States should have at least one year's military training for all male youths between 18 and 21 years of age; and Resolved, that the share system of tenantry is better than the lease system of tenantry for both owner and tenant in the South.

The library has done some very valuable war service work. In the first instance a permanent collection of books was made in home economics with especial reference to food conservation and food values. These were duly classified and copies sent to each of the home demonstration agents doing extension work in the state. A system of exchange was inaugurated among the agents and these books proved of invaluable service in carrying out war work among the women of Georgia. The number of these books will be rapidly increased in contemplation of the opening of the Degree Course in Home Economics this fall. Another line of war service rendered by the library was the clipping of all food administration articles appearing in the daily and weekly newspapers of Georgia and forwarding them to Washington in order that Mr. Hoover and the Food Administration might know of the progress we were making in food saving in Georgia.

The use of the library by faculty and students is rapidly growing. More than 2,000 books, bulletins and magazines were taken out for home use this year. In the reading room will be found 160 daily and weekly newspapers of the state and 155 other publications, mostly agricultural. There are now more than 500 herd books in the library and it is suggested that the room adjoining the library be taken over and made a seminar for the Division of Animal Husbandry. More books are being added all the time and additional shelving room is absolutely essential for the best interests of the library work.

#### **Division of Animal Husbandry**

For several years the value of cottonseed meal as a nitrogen concentrate in the finishing of beef cattle has been clearly recognized and demonstrated many times. However, there has always been a lack of carbonaceous roughage to feed with the cottonseed meal, or cottonseed meal and velvet beans. To find the cheapest carbonaceous roughage and the value of the various roughages in the feeding of beef cattle cooperative feeding experiments were carried on by the Division of Animal Husbandry this year at Talmo, Georgia, with a herd of fifty native bred Shorthorn and Hereford steers.



During a feeding period of 110 days, lasting from November 12 to April 2, sorghum bagasse was fed as a roughage with cottonseed meal and velvet beans. The cattle showed a daily gain of 1.61 pounds for the period and though the beans were charged at \$24 per ton, the cottonseed meal at \$45 per ton and the silage at \$5 per ton, there was a net profit of \$3.53 per head after all expenses were paid. In addition to this profit there had accumulated about three hundred loads of stable manure worth approximately three dollars a load. This feeding experiment clearly shows that sorghum bagasse may prove a very valuable source of carbonaceous feed in north Georgia. It should be said also that analyses show the bagasse to contain from 1.2 to 1.4 as much digestible nutrients as corn silage.

One thing in connection with this experiment I would like to call specifically to your attention. The bagasse was produced from the refuse of sorghum molasses and cane as a by-product. Now, since Georgia is so well adapted to the growing of sorghum and since there is a world shortage of sugar, thousands of barrels of this molasses should be produced and the valuable pomace should be made into silage and fed to dairy and beef cattle and not be allowed to go to waste.

This is but an example of the feeding experiments the Division of Animal Husbandry is carrying on. Other feeding demonstrations are being carried on to study the best methods of utilizing velvet beans. They have been fed in various forms during the last winter and next fall these results will be compared with gains obtained by allowing cattle to harvest the beans in the field with and without different kinds of hay and roughage as companion foods.

Daily records are being kept of the feed and the production of the dairy herd at the College and these data provide valuable information most essential in teaching the principles of feeding and breeding of animals. This information is of service not only to our students but also to our extension workers and farmers all over the state who are fully informed of the results through the press.

Systematic swine demonstrations have been continued in a number of places in south Georgia, and demonstrators have been encouraged to start a sufficient number of hogs on feed in a given community to make carload shipments. Definite plans are already begun for laying out hog producing plants on thirty farms in south Georgia and these plans include an arrangement for a permanent pasture, farrowing pens, and four small fields for the rotation of desirable crops.

The Animal Husbandry Division has supervision of the dairy, the farm and all of the livestock. The progress that has been made in their management will be shown under the head of "College Farm."



## Poultry Plant

We have had three different men in charge of the poultry department this year and, while there was some confusion in the work at the time the changes were made, the record for the year is an exceptional one. First, Mr. W. S. Dilts left us to go to the Quartermaster Department of the army and his place was taken by Mr. J. H. Wood in December. Under the latter's supervision the work progressed nicely until a few weeks ago when Mr. Wood volunteered for army service. At the present time Mr. O. T. Dickey has charge.

The work in poultry instruction is steadily growing. This year 306 long and short course students have been given instruction and a new course for women is being planned for next year.

Because of the high cost of feed and the inadequate floor space, the laying flock was reduced this spring to 700 of the best producers. These 700 birds have layed in four months, from January 1st to May 1st, 36,335 eggs, weighing 4,543 pounds, on an average of 52 eggs per bird. This is 9 eggs more than the average Georgia hen lays in an entire year. Their record follows:

### Record of 700 Hens

Month	Eggs Layed	Weight of Eggs
January - - - - -	4,811	600 pounds
February - - - - -	8,567	1,074 pounds
March - - - - -	12,121	1,515 pounds
April - - - - -	10,836	1,354 pounds
<hr/>		<hr/>
Total - - - - -	36,335	4,543 pounds
Average number of eggs laid per hen in 4 months-----		52
Number of eggs laid by average Georgia hen in 12 months----		43

Though no advertising was done, there were such large demands for eggs and young chicks that they could not be met. In March and April alone 3,300 hatching eggs and 2,100 baby chicks were delivered. In addition to this there were at the time 2,400 eggs in the department incubators and over 2,200 chicks and young stock in the plant. Some good hatching records were made, as 500 chicks from 600 eggs.

More land and buildings are badly needed by the department in order that poultry work commensurate with the needs of the state along this line may be done. The department will have more birds this fall than it has houses or land to accommodate, and yet these will not be sufficient to meet the needs of the situation next spring. A large new incubator cellar with a mammoth machine is very much needed, and, because of the scarcity and excessive cost of the common poultry feeds, room is needed for experimental work in determining the best poultry rations worked out with home-grown Georgia feeds. I earnestly request that you give the needs of this department your careful consideration.

## Division of Agricultural Chemistry

This division has continued its work on the chemical composition of the type soils of the state and new and interesting facts are still being brought to light.

In coöperation with the United States Bureau of Soils reports have been published on Richmond, Meriwether, Crisp and Brooks counties, and the following counties surveyed and mapped: Floyd, 506 square miles; Pierce, 518 square miles; Pulaski, 477 square miles; and Early, 503 square miles, making a total of 2,004 square miles.

The report of the chemical analysis of Jackson county has been issued, and that of Jasper county is in the hands of the printer.

The chemical analyses of Terrell, DeKalb, Turner and Crisp counties have been completed with the exception of the determination of potash in the last three named areas. The determination of potash has been delayed on account of the difficulty of securing proper chemical reagents for the determination. The laboratory has finally had to resort to the expediency of preparing some of these reagents in the laboratory. The work is now proceeding satisfactorily, after many difficulties in preparing these reagents were overcome.

This brings the total number of areas to 55, comprising 22,561 square miles. Thirty-six of these areas have been worked since the College began work in coöperation with the Bureau of Soils, January, 1912. During the progress of the work 288 types of soil have been mapped, 981 samples analyzed, and 11,772 separate determinations made. As the work progresses, our knowledge of the chemical composition of the soil types of the state becomes more comprehensive, and additional light is thrown on some of the problems of soil fertility. New problems for research are suggested by the chemical study of a great number of soils, and it is regretted that the laboratory cannot give more time to these problems.

The special investigations undertaken last year to determine the relative availability of the mineral plant food constituents of some of the important soil types of the different parts of the state have been delayed on account of the difficulty of procuring certain reagents of highest purity necessary for such work. However, with the solving of methods in the laboratory for preparing these, it is hoped to carry the work to completion on some of these problems during the present year.

In the progress of the soil survey work it has been revealed that the sandy loams in the Piedmont section are uniformly higher in potash than the clay types and also that the per cent of potash is always higher in the top soil than in the subsoil. This is contrary to the general teaching and it is thought that by separating some of these soils into their constituents of sand, silt, and clay, and analyzing these separates some information may be had as to the mineral composition of these soils and an explanation of the difference in the sandy loams and the clays. As a research problem, a graduate stu-

dent has made these separates from several of the typical soils and is analyzing each separate for potassium, phosphorus, calcium and magnesium. The analytical work is being completed at the present time and the results should be interesting.

The poverty of the data on the chemical composition of many of our southern crops, especially when grown under southern climatic and soil conditions, has seemed to make it necessary to make some analyses of such crops. About thirty analyses have already been made, and crops are now being grown on the College farm under suitable conditions for harvesting for a continuation of the study.

### **Division of Agricultural Engineering**

The Division of Agricultural Engineering is rapidly growing and expanding and cannot by any means with its present personnel meet all of the requests made to the division for help. Mr. Guy R. Jones, the extension man for the division, resigned early last year to go into an officers' training camp and Mr. Arnold Burns was appointed to take up the work. Recently Mr. Burns was called for army service, and Mr. W. E. Broach, a member of this year's senior class, has been nominated for the position. With all these changes, some excellent field work has been done.

Twenty new building designs have been prepared and 1,078 blue prints and 591 designs sent out to farmers for their use. Personal aid was given in the erection of 36 buildings and in the improvement of 80 others. Thirty-nine terracing demonstrations were held at farmers' meetings and personal aid was given in the construction of twenty-four dipping vats, twelve silos, and ten potato houses. A great deal of other extension work was done, which has been presented elsewhere in the report. With the present demand on the division for extension work, it will take two additional men to answer calls for service.

The second Farm Machinery Dealers' Short Course was offered during the winter meetings in January and it was well attended. The use of more machinery on the farm and the increase in cost has emphasized the need for better knowledge of its use and upkeep. For the benefit of tractor owners a five weeks' tractor course will be offered in July at the same time that the Summer School is in session, but the usual summer work will be continued.

In response to the needs of the Smith-Hughes Vocational Act, the division is offering seven new courses next year to Smith-Hughes students. In the three months war emergency course of the division of Agricultural Education one course will be given this summer in the study of farm machinery and its practical operation under actual field conditions.

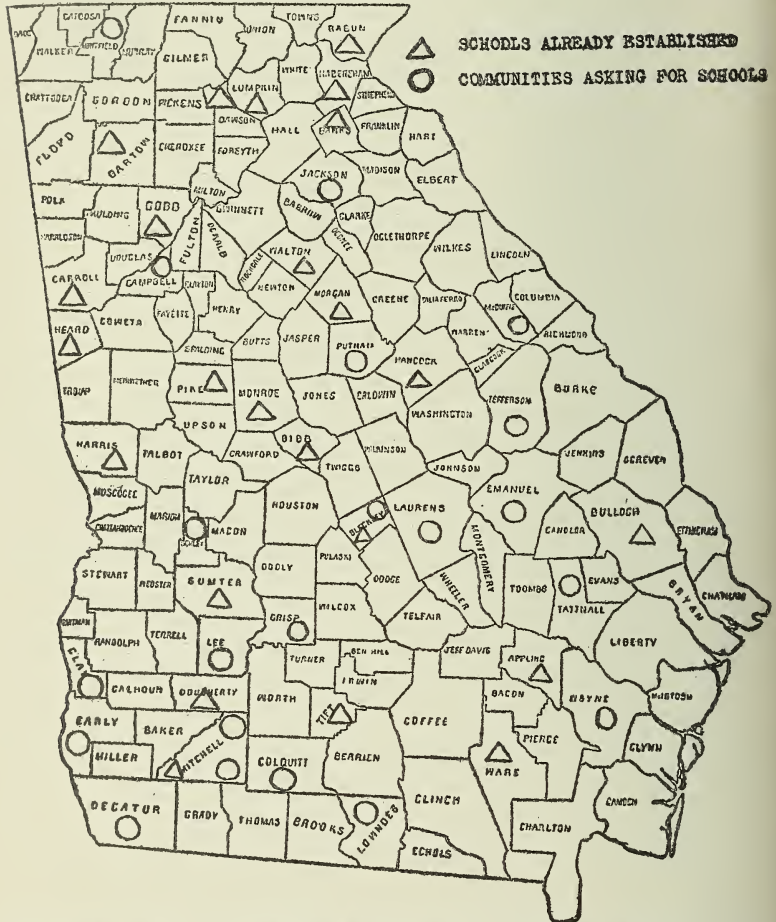
At the present time the division is giving courses in blacksmith work, carpentry and auto truck repairing to one hundred and sixty men sent to us by the United States Government for special training in certain lines of work needed in the army service. In order to take



care of these courses, it has necessitated the doubling of the forge and wood shop equipment and the installation of an auto truck repairing laboratory.

### Division of Agricultural Education

In December, 1917, our new division of Agricultural Education was organized under the direction of Prof. John T. Wheeler, formerly of Massachusetts Agricultural College, and the progress that has



Cut shows location of vocational schools and communities asking for these schools.

been made in so short a time is encouraging. Since December thirty-one communities have taken steps to meet the requirements of the Smith-Hughes Act, and have either established vocational schools or departments of agriculture. These communities are in addition



to the twelve district agricultural schools which have so expanded their work as to be able to qualify under the act. All of this goes to prove that the state is beginning to realize at least in a small way the value of a vocational agricultural education in Georgia.

One of the greatest drawbacks to the vocational movement at this time is the lack of properly trained teachers. The demand far exceeds the supply and so in an effort to give this necessary agricultural leadership in secondary education the College of Agriculture is giving this summer a three-months' war emergency course in vocational agriculture to experienced teachers who are already in the field and who have had sufficient farm experience and science to fit them for the work. This course has been covered in detail in another section of this report in connection with summer work.

The Federal Vocational Board has designated the College of Agriculture a "teacher training" institution for vocational agriculture inasmuch as the College is the only institution in the state with sufficient equipment and facilities for carrying on such training. Allow me to state that the National Vocational Educational Act provides for financial aid in maintaining the Division of Agricultural Education, reimbursing the College with federal funds for one-half of the salaries of those instructors devoting their time to "teacher training" in the Division of Agricultural Education. In the same way one-half of the total maintenance expense including such items as office supplies, stenographic help, janitor service, heat, light and material consumed in class and laboratory work, is also met by federal funds.

The stone house directly in front of the main agricultural building has been given over to the division, two offices and one large double laboratory room having been fitted out for it. The building provides ample accommodations for the division, but needs proper heating and plumbing fixtures to make it comfortable. It is hoped that sufficient funds will be provided for this improvement.

The establishment of courses in vocational education marks an epoch in the educational history of the state. The liberal education which we formerly considered sufficient for our needs is being supplemented by courses whose purpose and end are productive efficiency and whose methods are practical applications of science to the problems in the field. Through vocational courses boys and girls who have been leaving school at fourteen years of age will be encouraged to continue their studies and will be permitted to do so in as much as they will have part of their time to give to actual production.

The Georgia State Board of Vocational Education has placed Mr. R. D. Maltby at the College as state supervisor of vocational schools and we appreciate the privilege and opportunity of working in co-operation with him.

## Division of Agronomy

The Division of Agronomy has continued its good work, though the loss of five men through entrance into the army has been sorely felt inasmuch as these men were thoroughly acquainted with conditions over the state and with the details of the work they were doing.

The division has during the year examined, surveyed and drained 30,023 acres lying in thirty-five counties, and since the work first began forty-eight counties have been reached. All of this drained land is being brought under cultivation and it will result in the growth of hundreds of thousands of dollars worth of food crops inasmuch as the land will not be immediately adapted to the production of cotton.

Material advance has been made in creating interest in the use of better seed for all farm crops. In the field meetings last summer one member of the division spoke to farmers in forty-two counties regarding the selection of seed for earliness, for larger yields and for high oil content as with peanuts and cotton.

The analysis of cotton seed for oil content has been continued this year, 250 determinations being made for oil, and 202 determinations for nitrogen content. The examinations showed that there was a difference of 16.5 gallons of oil per ton between the best and the poorest seed analyzed. At the present price of cotton seed oil (\$1.31 1/4 per gallon) this difference would amount to \$21.66 per ton. In recognition of the valuable work that the College has been doing in oil content of cotton seed the oil mills of the state have agreed to recognize quality in seed by offering a premium for high oil content seed where these seed could be bought in carload lots.

Investigations have also been made on the oil content of peanuts and soy beans. The following table gives some of the results which have been reported from the analyses of these two crops.

### Analyses of Peanuts

Variety	Per cent Hulls	Per cent Moisture	Per cent Oil	Lbs oil per ton	Hulls
White Spanish - - -	21.61	3.23	37.31	780	23.58
N. C. Running - - -	25.61	5.00	25.58	723	27.00
Tennessee Red - -	42.90	2.49	26.75	535	
Virginia Running - -	43.98	2.98	23.53	470	43.98

### Analyses of Soy Beans

Variety	Moisture	% oil	Total Gals.	Lbs. Oil Per ton
Haberlandt - - - -	7.85	21.82	58.37	436
Tokio - - - - -	8.79	21.13	56.52	422
Wilson - - - - -	8.46	18.45	49.2	369
Mammoth Yellow -	9.11	16.87	44.98	337
Edward - - - - -	8.14	16.72	44.58	334
Ottoman - - - - -	8.44	15.33	40.87	306

You will notice from the analyses of the peanuts that the White Spanish and the North Carolina Running run very high in oil, while the Tennessee Red and the Virginia Running are very low. In fact, the difference between White Spanish and Virginia Running is 310 pounds of oil per ton. In the analyses of the soy beans we see that the Ottoman runs rather low. This work in the oil content of the three crops mentioned has and will result in saving hundreds of thousands of dollars to the farmers of the state. Since our peanut crop increased last year by more than six hundred per cent and since so many of these peanuts are being sold for their oil content, our work in analyzing the three crops mentioned should be greatly expanded, and this is impossible unless special funds are provided for this work.

Three special farm management surveys have been made during the year. One survey of fifty farms was made in Pike county and a similar survey was made in Mitchell county, the predominating soil type in the first county being a Cecil sandy loam and in the second a Tifton sandy loam. A third survey was completed and published of 218 farms lying for the most part in the counties of Lowndes, Brooks, Thomas, Grady, Decatur and Colquitt. The results of this latter survey brought out the fact that with the proper use of grazing crops the net cost per hundred pounds gain in hogs was \$5.88 and that in this line of industry lay a great future for south Georgia.

#### Division of Forestry

Extension work in forestry was inaugurated during the last year, but it was not until April 15th that an extension forester, a specialist with training in forestry at the College of Agriculture and in the Forest Service, was appointed. His work deals with the conservation of wood and labor by treating fence posts to prolong their life; with assisting the government in locating supplies of the woods required for war activities, thereby aiding farmers in disposing of their woodland products, and with assisting the State Fuel Administration in the conservation of coal by stimulating the production of cordwood on the farm.

The creosoting plant has been operated in connection with the courses in farm forestry, so that students might become conversant with the methods of treating fence posts. The forest nursery has been extended considerably and a large amount of seed-bed and lining-out stock set out. The nursery now offers some fine shade trees, as well as ornamental and fruit stock. About \$40.00 worth of stock was sold during the last spring.

The arboretum planting has been somewhat extended and construction begun on a system of paths which will make accessible to the public the educational value of the project. Some 25 additional specimens have been set out, making a total of about 175 species.

The Forest Museum has been further extended in its collection of woods and tree disease specimens. Visiting foresters have spoken highly of the Forest School equipment and Museum, and the United States Forest Service now ranks Georgia with the best of the forest schools in the country.

In addition to the regular instruction work in the Forest School and the short courses offered students in agriculture, there are offered two special courses for students in the Division of Home Economics. In addition, there is a possibility of its laboratories being used for the instruction of drafted men in wood technology and lumber inspection.

The forester in charge of the division has been appointed secretary of the wood fuel department of the State Fuel Administration. Plans are being laid for a state-wide campaign to assist cities and towns in the organization of municipal woodyards, and to stimulate the production of cordwood by farmers and woodland owners. The division supervises the preparation of charts, posters and printed literature to be used in this campaign. If the people of the United States will curtail their consumption of coal for domestic heating but 25 per cent, the government will have the additional 150,000,000 tons of coal required for the completion of its war program. The state of Georgia produces annually more than twice the amount of wood required to substitute for the coal used in domestic heating by the people of the state.

### Horticultural Division

The Horticultural Division has just passed a most prosperous and profitable year. The orchards are in good condition; both trees and vines show healthy, vigorous growth, and are laden with fruit.

The greenhouse has produced more than ever before and is just about at the limit of its capacity. Unless we can have our ranges doubled, we are in a position where we cannot take care of all the special service work asked of us, and at the same time use the greenhouse as we should for the instruction of students.

Investigational work throughout the state has been continued as heretofore. This work includes the principal fruits, nuts, and truck crops. Over 100,000 peach trees—June buds—were set, in Meriwether county alone, during the winter. It is estimated that no less than 2,500,000 trees of various kinds, throughout the state are under advisement of representatives of the division.

Several Satsuma orange groves, amounting to about 100 acres, have been started in southeast Georgia with every prospect of success attending. Varieties of pecans suitable for north Georgia are being tried in that part of the state.

Spraying experiments with powdered lime-sulphur have proven successful when used for scale while the trees were in a dormant state, but when mixed according to directions and used on trees in foliage, it was found too strong for peaches.



Tests of varieties of Irish potatoes with a view to securing seed suitable for both spring and fall crops are under way. Variety tests of tomatoes are also in progress. In round numbers there are 1,000 acres of Irish potatoes, and half as many acres of tomatoes under the supervision of division specialists.

Fertilizer tests with both fruit and truck crops are being continued. Apples in north Georgia show little response to the application of potash, while in south Georgia Irish potatoes and tomatoes show the need of this element.

Interest in gardens has practically doubled since last year. Not only in the country, but in towns as well, war gardens—municipal, and school, and home—are receiving an unprecedented amount of attention. Home orchards are also assuming an importance which has not been accorded them before. Farmers and home owners in towns and cities are realizing that it pays to spend a little time pruning and spraying. In several counties farmers have agreed to manage their orchards in coöperation with their county agents and representatives from the division with a view to making them demonstration centers.

While landscape work has been rather superseded by the interest in food production, it is not wholly neglected. Plans are being made for beautifying the premises occupied by Mr. P. O. Vanatter and Prof. L. E. Rast. Numerous school grounds, church properties, city halls, court house grounds and private homes have had the advice of the division. Plans have been drawn and plantings suggested.

### **The Division of Home Economics**

A growing demand that the state of Georgia provide for its women opportunities for higher education similar in rank to those provided for men is being met by the establishment in the State College of Agriculture of courses leading to the degree of Bachelor of Science in Home Economics. The need for these courses, long evident, has been made more acute by the rapid extension of the coöperative extension work which demands women with broader training than the state can now furnish. At present there are more than one hundred counties organized in home demonstration work whose agents, together with supervising agents and specialists, total 131 workers. This number will be rapidly increased until every county shall have an agent who is well trained in agriculture and home economics. The number of high schools giving work in home economics is increasing. Four-year courses are needed for the training of teachers for this work.

Rapidly changing economic conditions with reference to food demand the utmost in the way of skillful application of science to problems of production, conservation and utilization of foods. The present war is constantly calling women into special forms of service which demand thorough, scientific preparation. The readjustments

—social and economic—of the next few years will call for still further and more skillful training of women to maintain efficiency in home and community efforts. Women abroad have had to assume large responsibility in agriculture and industry. In our own country the government is urging that women be given broader technical training to fit them for definite leadership in the difficult work of the future, and in answer to this request the College of Agriculture has offered courses in agriculture, home economics and related sciences which will train women for this leadership. Hitherto they have had to go to universities in the north to secure these educational opportunities.

The Land Grant colleges in other sections have for a long time had well established departments of home economics and have provided opportunities for thorough professional training. We cannot afford to take lower rank than other states in the educational standards which react so directly upon the welfare of the home.

The newly established courses in the State College of Agriculture provide training along the following lines:

1. Higher education for the profession of home-making, which includes general culture and preparation in the broadest sense for taking part in municipal and rural community upbuilding along lines of health, sanitation and economic and social welfare.

2. Preparation for positions as county and supervising home demonstration agents or specialists in extension work in home economics.

3. Preparation for high school teaching in home economics.

4. Training in institutional management; that is, the management of schools, hospitals and hotels from the standpoint of diet and feeding; the management of lunchrooms, cafeterias, and like places.

5. Preparation for carrying on special lines of agricultural industry suited to women, such as horticulture, commercial canning and preserving, poultry husbandry, home dairying and plant pathology.

6. Professional training for teaching agricultural subjects related to women's work in normal schools and other institutions.

7. Lines of special technical and research work in which women can engage for the State and Federal governments.

8. Editorial work in home economics and agriculture.

The degree in home economics requires four years of college work based upon the required high school entrance units to the University. The last two years of this course will be given in the College of Agriculture, the work of the junior year being offered in 1918-1919. For admission to the junior class, graduation from a state normal school or other institution giving two years of college work is required. Students without such graduation must present two years' work of college rank. In any case, the work done must total 36 credit hours of college work preceded by the required 14 units from an accredited high school or the equivalent. It will be seen

that the work of the Home Economic Division will be of senior college rank and will enable graduates of normal schools and other junior colleges to continue their education in a state institution.

A Georgia woman, Miss Mary E. Creswell of Athens, who for the last four years has had charge of home economics work for the United States Department of Agriculture in fifteen southern states, has been appointed director of home economics and will give leadership to the new department. It was Miss Creswell who organized club work for women and girls in Georgia in 1911 as a member of the staff of the College, and since that time she has been helping in Washington to plan and direct home economics work for the entire country.

The admission of women to the College of Agriculture is but another form of conservation. There has been a distinct need for the higher education of women along broader technical lines, and so the teaching facilities and laboratories which have formerly been devoted to the higher education of men will now serve women as well. No other institution in the state was in position to take up this work at so small an expense to the state.

### Division of Plant Pathology

The Division of Plant Pathology, newly established in September, 1917, is united with the Division of Forestry. Several cooperative projects have already been entered into with the United States Department of Agriculture. One specialist devotes his entire time to sweet potato diseases, carrying on demonstrations in some 25 counties. All the larger sweet potato storage houses were visited this spring and demonstrations made in the proper selection of seed stock, its treatment to prevent, and instruction was given as to the preparation of the seed bed. A campaign promoting sweet potato storage house construction, in which the railroads and many chambers of commerce are uniting, is being inaugurated this summer. Last year the loss of the potato crop in storage amounted to at least fifty per cent. With the proper storage facilities this loss will be greatly lessened.

Further arrangements have been made with the Bureau of Plant Industry to continue the work in the control of watermelon anthracnose and stem-end rot. A number of demonstrations will be conducted in the vicinity of Macon and Fort Valley.

An investigation of the so-called "die back" of peach is being conducted in the laboratory. It has been found that much of this damage is due to brown rot and scab, although some *Valsa* was found. Inoculation experiments will be made in an effort to develop some method of control.

Under a cooperative project with the Office of Cereal Investigations, United States Department of Agriculture, the laboratory of the Division of Plant Pathology becomes a substation for the in-



vestigation of corn diseases, particularly root rots. A specialist will be detailed to work in Georgia in the near future.

Under the direction of the Division seven specialists were detailed to Georgia from the United States Department of Agriculture for use in the smut eradication campaign last fall. These men visited county agents and farmers, and demonstrated the use of the concentrated formaldehyde method of treating oats and wheat—a method giving excellent control, but cheaper and much simpler than other methods advocated. About sixty counties were visited, and nearly 14,000 people reached. This spring a follow-up campaign has been inaugurated to determine the value of last fall's work.

Regular instruction work is carried on at the College, five elective courses being offered juniors and seniors. Two special courses are required, one by the Division of Home Economics, the other by the Division of Agricultural Education.

The Division is cooperating with the War Board of the American Phytopathological Society and has agreed to pool its interests in research and publications, thus avoiding duplication of effort.

The plant disease survey of the state is making excellent progress, over three hundred disease reporters having been appointed. Reports and diseased material are sent to the Division regularly. This material is identified and the reporter advised as to the specific disease and the control measures. Within a few years there will be on file data as to the occurrence and importance of all diseases of economic crops common to Georgia. Such data is of great value in inaugurating disease control campaigns.

#### Division of Veterinary Medicine

During the last year considerably more hog cholera serum has been furnished than during any year since the establishment of the serum plant, the increase over the previous year being 239,550 cubic centimeters. In addition to this 11,750 c. c of hog cholera virus was furnished to the State Veterinarian, or upon orders from his office, for the simultaneous treatment of breeding swine. While there has been an increase in the cost of all materials used in the production of serum, it has still been possible to keep the price down to one cent per cubic centimeter. Sufficient serum for the treatment of over 52,000 head of hogs was sent out during the year. On account of the fact that the plant must, in order to be kept going, be operated simply as a commercial proposition, it has not been possible to carry on experimental work except in a very small way. Undoubtedly there is need for further experimental work along the line of production of a better product, and we have begun some work in this direction, yet there is little of interest to report until further experiments have been carried out.

A small amount of experimental bacteriological work has been



done in an effort to produce a preventive and curative vaccine for roup and contagious epithelioma of fowls. This is looked upon as an important line of endeavor as the poultry industry suffers serious losses from this disease from time to time. It is hoped that these experiments may result in bringing about a method by which poultry may be cheaply immunized against the disease.

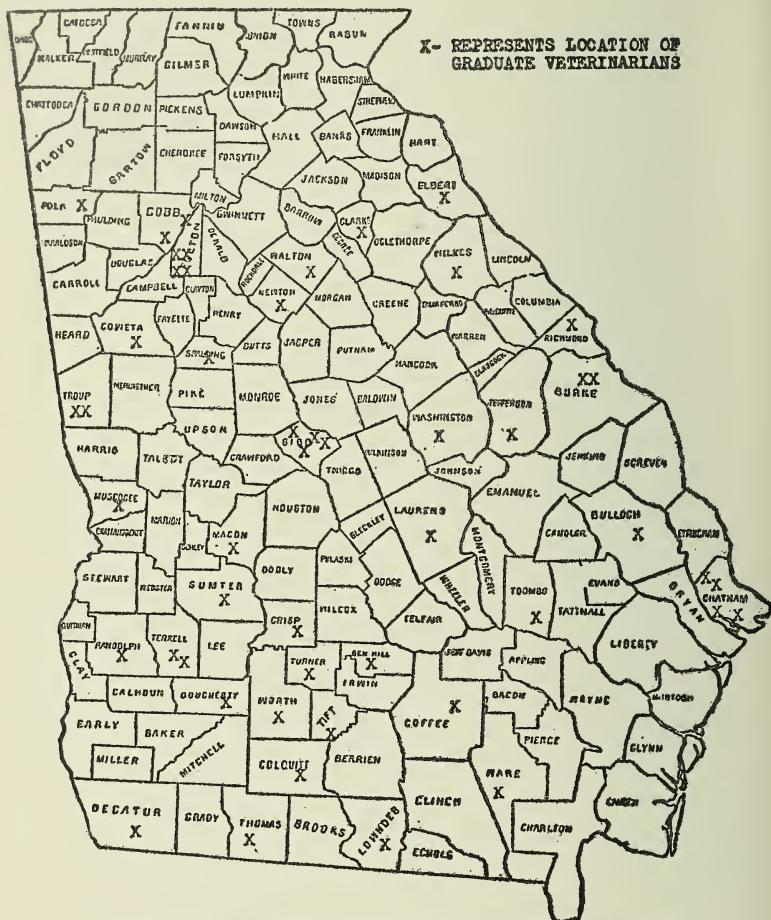
During the last year the curricula for the junior and senior years of the Veterinary Degree Course has been adopted by the staff of the College and the faculty of the University. The Division is, therefore, now offering a four years' course in veterinary medicine leading to the degree of Doctor of Veterinary Medicine. This is especially fortunate at this time.

On account of increased entrance requirements and longer course required of the private veterinary schools by the War Department, Department of Agriculture and American Veterinary Medical Association, there has been a heavy falling off of attendance at the private schools and it is reported that some of them have decided to close. This results in the graduation of smaller numbers of veterinarians. Since the South's supply of men of this profession has been largely drawn from the schools and colleges of other sections of the country, the shutting off of this supply will be a serious blow to the development of the rapidly growing livestock industries, unless provisions are carried into effect for the education of southern men in this profession in numbers sufficient to supply the wants of the South in this direction.

It is apparent from developments during recent years that the burden of veterinary education must, in the future, rest upon the shoulders of state institutions of learning. At the present time there are less than fifty graduate veterinarians in actual practice in Georgia and they are all located in 37 of the 152 counties. It should be apparent to anyone at all familiar with the conditions of the livestock industries of the state that this supply is inadequate to properly look after the sick animals on the farms and in the cities and to control the many outbreaks of contagious and infectious diseases that appear from time to time. It may safely be stated that at present there are at least one hundred locations in the state that need the services of a graduate veterinarian.

Many calls come to the Division from counties and towns desiring that veterinarians locate there in practice and it has in a few cases been possible to interest practitioners in the respective localities. Opportunities for veterinarians were never so good as at present and demands for their services are rapidly increasing. Of the 20,000 veterinarians in the United States more than 1,200 have been commissioned as officers in the Veterinary Corps of the Army, and, should the war continue, many more will be required within a short time. In order that a sufficient supply of men of this profession may be provided, the War Department through the Pro-

vost Marshal General places veterinary students of draft age, in attendance at approved veterinary colleges, in class "V" of draft and permits them to be furloughed in order that they may finish their education.



Only 37 counties in Georgia have graduate veterinarians.

### Cooperative Enterprises

There has been marked progress made in all of the cooperative enterprises that we have been carrying on with the United States Department of Agriculture through its various bureaus. A significant step forward was made when the College began a new class of cooperative work in plant pathology in order that more attention might be given to the plant diseases of our staple farm crops that are causing such great losses to Georgia farmers every year. Of-

fers have been received to take up other very necessary enterprises but the College finds itself unable to do so on account of its restricted income and because of the fact that these federal funds must be offset dollar for dollar by state appropriations. The fact is, money that should now be spent for the development of agriculture in Georgia is going to other states and this matter is of such grave concern to the general good of the Georgia farmer that I trust steps will be taken to secure for our people the benefits of this federal money which has been already appropriated for them.

The work of the agents in encouraging beef production has resulted in 1479 pure bred, grade and feeding cattle being placed in the tick free area of the state. Realizing that a proper amount of feed is the only feasible basis on which to build a permanent livestock industry the agents aided in constructing thirty-seven silos and worked out plans for fifty-seven pasture rotations that have been put into effect. As an aid in marketing the livestock raised and in encouraging a closer study of livestock conditions a number of county livestock associations were organized. During the early fall months of 1917 in cooperation with the Animal Husbandry Division of the Bureau of Animal Industry at Washington 7,000 beef cattle were moved into Georgia from the drought stricken areas of Texas. A large percent of these animals were breeding females carrying a strong infusion of beef blood. During the winter a systematic effort was made to visit all of the farmers holding these cattle in order that advice might be given them in the best methods of feeding and caring for these cattle, for very few of our farmers have ever fed cattle on a very large scale. Comprehensive feeding demonstrations were undertaken with several farmers to show the value of velvet beans as a factor in beef production.

The fact that both of our dairy specialists volunteered for military service last fall seriously hampered our dairy extension work for a time. However, cow testing associations were formed in Putnam and Greene counties. The farmers are being taught to cull out those cows that are not paying good returns. Many grade and scrub bulls have been replaced by pure bred sires and during the spring of 1918 the College bought for Georgia farmers 272 head of high grade dairy animals from Wisconsin.

In cooperation with the dairy division of the United States Department of Agriculture the College has had a cheese specialist working in the mountain districts of north Georgia. One cheese factory has been established at Young Harris and the preliminary work has been completed in the formation of a second factory at Choestoe.

Some very valuable work has been done in the marketing of livestock and general farm crops in cooperation with the United States Bureau of Markets. Our agent aided in the organization of associations of stockmen, suggested plans for the arrangement of scales



and weighing pens, and then helped assemble and grade the hogs and cattle on auction days. Three sales were held at Cairo, two at Valdosta, one at Bainbridge and one at Hahira, and in each instance the hogs and cattle brought a higher price than they could be sold for in the local market. Sale and auction plans are being worked out for Donalsonville, Quitman, Cuthbert, Dawson, Americus and Columbus.

One of the greatest hinderances in the efficient marketing of farm products lies in the lack of uniformity of grade and of quality of product. At the Chattahoochee Fair in Columbus, at the State Fair in Macon and at the meeting held at eight of our district agricultural schools our agent not only told the people why farm products should be better graded but actually gave demonstrations in the grading of Irish potatoes and sweet potatoes. Some of the most efficient work in grading was done in connection with the sweet potato storage house campaign conducted last fall. At the livestock sale a prominent feature of the occasion was the grading of the hogs in the presence of the farmers.

Another feature of the marketing work has been the formation of the County Agents' Exchange to help the farmer through the county agent in finding seed, breeding stock, feed, and other commodities which are needed by farmers in one section of the state and which can be supplied by those in another section. Says the marketing agent, "It has been interesting to note that rarely, if ever, does an agent have a demand for anything which cannot be supplied by another agent."

In cooperation with the Bureau of Animal Industry two men have been appointed to do educational work in teaching the farmer how best to combat the livestock diseases which are causing millions of dollars loss to the Georgia farmer every year. Special attention is being given to educational work in the control of hog cholera and in cooperation with the county agent strict sanitary measures and the use of serum is being taught the owners of thousands of farms.

In the Division of Plant Pathology and Forestry excellent work has been done on plant diseases and methods of prevention. Last fall small grains were treated for smut on two hundred and seventy-four farms. Public demonstrations were given in a number of instances and exhibits were placed at all the leading fairs to create interest in the work which is distinctly new in this state. The results of the seed treatment are being followed up this spring and should constitute very valuable information as a basis for further work in plant diseases.

The Division of Agronomy has been carrying on some excellent project work in field crops, rotations, pastures, farm accounts and seed selection. Those particular crops which may furnish wheat substitutes and those which increase the fertility of the land and



at the same time furnish food for man and domestic animals, have been given special attention. In cooperation with the Office of Cereal Investigations twelve hundred pounds of rice has been distributed this year and its growth is being encouraged as a means of providing a sufficient amount of substitutes to take the place of wheat.

The Division of Horticulture is carrying forward cooperative work in seventeen counties in trucking, orchard and garden work, and with pecans. In McIntosh County there is under the supervision of the division over 500 acres of Irish potatoes. The Division has supervised the planting, cultivation and spraying of 100,000 peach trees and has conducted many spraying demonstrations in garden and orchard. The garden campaign this spring has been encouraged in every way possible and valuable assistance has been given in conducting urban work. In addition to the growing of the pecan in south Georgia it has been found that the counties along the coast and along the Florida line were well adapted to the growing of the Satauma orange and hence in eleven counties demonstration orchards have been planted.

In cooperation with the United States Bureau of Soils the College has aided in surveying and mapping 2,004 square miles of soils in Floyd, Pierce, Pulaski, and Early counties. Reports have been published on the soils of Richmond, Meriwether, Crisp and Brooks counties. This year a report of the analysis of the soils of Jackson County was published and distributed, and the report of Jasper County is now in the hands of printer with only a few chemical analyses to be made of the soils of Terrell, DeKalb, Turner and Crisp Counties before they will be ready. The demands for soil analysis of many counties are on file and the people are becoming more anxious to learn of the actual soil conditions of their sections and to interpret these facts in the light of the crop yields they are getting and the fertilizer they are using.

The pig club work carried on in cooperation with the Division of Animal Husbandry of the Bureau of Animal Industry of the United States Department of Agriculture has continued its successful work and of all the branches of animal husbandry in the state hog raising seems to be coming more and more into popular favor. Pig clubs were first organized in the state in 1914 with an enrollment of 977 which increased to 1,468 in 1915, 3,605 in 1916, 4,700 in 1917 and will this year reach the high record mark of 10,000. In keeping with this increasing interest in pig club work there were 1,888,000 hogs in the state in 1913, 1,945,000 in 1914 and 2,757,888 in 1917. While it is conceded that all of this splendid increase in hog production is not attributable to the work of the pig clubs yet it is a significant fact that last year pig club boys in 51 counties produced \$31,941.76 worth of hogs at an average profit of \$20.59 per head. They also exhibited at the three big

state fairs 509 head of hogs and won prizes amounting to \$3,400. These wonderful results must necessarily have a stimulating effect on the general growth of the industry and they have accomplished much in drawing the attention of the farmer to the value of purebred hogs and the importance of securing economical feeders. The establishment of meat curing plants over the state is a tribute to the wonderful growth of the hog industry, and in providing a market for the farmer for his meat they are doing one of the greatest things possible to help him in his fight against the boll weevil.

The poultry club work is carried on in cooperation with the Division of Animal Husbandry of the Bureau of Animal Industry. In 1913 the work was carried on in nine counties while this year it has been conducted in twenty-five counties. In 1917 poultry club members set 24,317 eggs, hatched 16,216 chickens and raised 10,112 of them to marketable age. Poultry club members were taught the proper housing of chickens with minimum cost and how to use home grown feeds when the prices of other feeds became so high as to make them almost prohibitive in the feeding ration. It was shown that eggs could be kept a great deal longer when they were infertile and so this spring a "Swat the Rooster" campaign has been carried on not only among the club members but among the adults as well. Under the direction of the county agents and the extension specialist the people are learning the use of water glass and how to preserve the cheap eggs that are raised in summer for use in the winter when eggs become high.

#### Chart of increase in club enrollment.

1917 - TOTAL FOR YEAR	
1918	
May, 15	

Cooperative club work has been carried on in the state with a number of agencies which have encouraged the boys and girls to such an extent as to have aided materially in its success. Had it not been for the hearty financial support and moral support given by state and county school officials, county commissioners, boards of trade, chambers of commerce, farmers' organizations, women's clubs, bankers and other public spirited citizens the clubs never could have achieved the great success that they have. It is impossible to name the thousands of individuals who have aided us in carrying forward our work and who have without due recognition rendered meritorious service to the institution and to the state.

As the public learns more of the extension work, of its intent and purposes and the results it is accomplishing, the greater becomes its appreciation. Wherever extension men and women have had the opportunity to render a service, they have been enthusiastically received and liberally supported. The state has put itself on record

as accepting the Smith-Lever Act and in order to take advantage of all the money accruing under this act for 1918-19, the General Assembly of Georgia must make an increase of \$20,977.91 in its offset to match an equal appropriation from the Government. These added funds are badly needed to meet the greatly increased cost of county agents work.

When the men and women, now working as county agents, have paid all of their living expenses and have borne the upkeep of a car, which is absolutely necessary in order that they may visit all parts of the county and serve the people most acceptably, they clear less money than many of our ordinary laborers. They must be paid better salaries or we will lose many of our best men and women with the result that we shall be unable to fill their positions acceptably. In the last few months twenty-three men, three of them district agents, have resigned to engage in demonstration work in other states, to teach in the district agricultural schools, to enter the service of the United States Department of Agriculture, or to farm. A number of women have also resigned to enter more lucrative fields than demonstration work. This matter is of such serious concern as to warrant your most careful consideration and if the additional Smith-Lever funds are not met by an offset from the state we will lose more of the men and women whom we have trained specifically for extension work and who are now, because of their wide experience, in a position to render excellent service.

The funds available for extension service in 1917-18 were received from a number of sources, special appropriations coming from the offices of county commissioners and ordinaries, boards of education, boards of trade, fair associations, corporations, women's clubs, banks and individual citizens. County funds for home economics and demonstration work amounted to \$90,000, and this does not include \$25,705 which was given in prizes and premiums to club boys and girls. Thus it appears that the people have given directly \$115,705 to the support of agricultural extension work within the state. From the States Relations Service of the United States Department of Agriculture there was the regular appropriation of \$52,000 and then there was in addition to this an extra appropriation of \$107,000 for expansion of the work along war emergency lines, the extra appropriation being spent in food production campaigns and in employing special workers to teach the people how and what to save to help feed our associates in the war.

The Federal appropriation for Smith-Lever extension work in 1917-18 was \$77,129.25 and this was offset by the state with \$67,129.25, the initial appropriation of \$10,000 requiring no offset. From the various bureaus of the United States Department of Agriculture in Washington indirect appropriations amounting to \$17,080 were obtained. To the foregoing funds should be added an appropriation of \$40,000 from the state which is used for the off-



setting of a part of the government funds on the dollar for dollar basis as is provided in our memorandum of agreement with the Secretary of Agriculture. The state appropriated \$2,500 which was used in holding farmers' institutes over the state. Therefore, the funds for all the different phases of extension work for Georgia aggregate \$478,543.50, the major portion of which is not spent in Athens but in the counties over the state in paying the salaries of 226 county agents and home demonstration agents, the report of whose work has already been given.

### Experimental Plats

Fertilizer tests are being carried on in twenty-six counties in the state on widely differing soil types and some very interesting results have been obtained. These will be reported in bulletin form this summer. We find in some sections of the state that liming and cover crops have not paid any returns on the money invested while in other places they have so increased crop yields as to be indispensable in permanent agriculture. On one of the plats we have found that phosphorus was a limiting factor and that no matter what was applied to the soil it did not give a good yield until it was treated with phosphorus. On another soil we found the limiting factor in crop production to be potash.

Variety tests are being carried on with soy beans and the most promising are being grown for distribution. One that has attracted a great deal of attention and seems to be the best bean for edible purposes is the soy lima which was recently imported from the East. On analysis it was found that all the early maturing varieties ran higher in oil than the later varieties.

Specially selected cottonseed have been grown and distributed among progressive farmers in forty-one counties, extending from Gordon County in the northwest to Ware County in the southeast. College No. 1, the strain which has given such good results in north and middle Georgia, is being grown in the southern part of the state and selections will be made to adapt it to the needs of that particular section.

The test plats at the College are being under drained and it will now be possible to complete some very valuable experiments which have heretofore been incomplete. The test plats are very valuable for the instruction of the thousands of visitors who visit the College each year and as a field laboratory for our students who are doing research and experimental work. Here variety tests are being conducted with corn, cotton, velvet beans, soy beans, the cereals and other crops. In connection with these variety tests are run tests in fertilizers as a check on the other work being conducted over the state. All of the tests definitely show that Georgia soils are badly in need of nitrogen and that through legume crops this material can be cheapest supplied. On some soils it has been shown that under the present system of farming potash is applied at a



loss and on others that phosphorous has been applied at a loss. In some cases it seems that a particular fertilizing ingredient will give increased yield on one crop and will not materially affect another crop. From the results compiled after five years of work it seems that we have been using fertilizer very unscientifically and that much more attention should be given this problem by the farmers.

### College Farm

The total receipts and the net earnings of the College farm indicate that progress is being made in its development. The financial showing for a period of eleven years proves the value of diversified farming in reclaiming practically abandoned land. The receipts for the fiscal year are \$15,826.22, representing an increase of \$2,477.44. The receipts from the dairy herd are \$11,632.29 as compared with \$8,187.50 for the year 1916-1917. This represents an increase of \$3,444.75. The profits on the College farm were \$4,028.62. The sale of farm products exclusive of live stock amounted to \$2,024.38, or an increase of \$380.99 over last year. The following tabulated statement shows the progress that has been made from year to year since 1907 in the development of the farm. As will be seen from this table the total farm receipts for the fiscal year ending June 1, 1908, amounted to \$1,799.39 and that for each succeeding year these receipts have continued to increase. This year they amounted to \$15,826.62. In 1908 one-fourth of the total receipts was derived from the sale of cotton. The annual sales of cotton for the period under review have remained fairly constant and during the last year with abnormally high prices the total sale of cotton only amounted to \$1,771.02. This was approximately eleven per cent of the total farm receipts.

The receipts from the coöperative creamery for the fiscal year were \$3,569.94, making a grand total of \$19,396.56 from the Animal Husbandry Division.

It is gratifying to note that the entire College farm is under fence or is in cultivated fields. Much of the land is still in a low state of cultivation and it will take additional time, money and labor to bring it all to a desired high state of cultivation, but it is felt that material progress has been made to this end. Furthermore, the improvements are of a permanent nature. While economy has been practiced an attempt has been made to provide as permanent buildings as possible. Stumps and stones have been cleared from much of the cultivated land. These improvements will continue to pay increased dividends for many years to come.

The grazing experiments established in the timbered area are giving satisfactory results. It is planned to chop the underbrush from increased areas and seed them to tame grasses. During the last year material progress was made in improving the roads through the College farm. Grades were improved in some places and much of the road previously constructed has been top soiled.

# RECEIPTS FROM COLLEGE FARM

	Dairy	Sale of Live Stock	Sale of Cotton & C. S.	Total Receipts	% Increase			% of total receipts	
					Total	Receipts	Dairy	Live Stock	Cotton
June 1, 1907-1908	\$1124.44	\$ 72.29	\$469.62	\$ 1799.37			62.5	4.	25.5
June 1, 1908-1909	3891.40	241.52	848.75	5239.42	\$191.1		74.2	6.5	16.2
June 1, 1909-1910	4331.02	319.90	1831.83	6709.93	28.0		64.6	4.7	27.3
June 1, 1910-1911	4346.87	762.51	1779.95	7149.58	6.5		60.7	10.6	24.9
June 1, 1911-1912	5099.44	1846.23	1421.14	8581.41	20.0		59.4	21.5	16.5
June 1, 1912-1913	5675.46	1520.30	1113.45	8581.53			66.1	17.6	12.9
June 1, 1913-1914	6036.57	2667.61	1623.28	10335.46	20.4		58.4	25.8	15.7
June 1, 1914-1915	6562.60	2791.57	687.73	10173.60	—1.5		64.5	26.4	6.7
June 1, 1915-1916	6700.41	3056.02	1043.93	11002.69	9.14		60.9	27.8	9.5
June 1, 1916-1917	7392.04	4313.75	1359.59	13249.18	21.32		55.4	32.3	10.2
June 1, 1917-1918	10750.34	3051.90	1771.02	15826.62	18.48		67.9	19.3	11.2
Total sales	61,910.59	20743.60	13950.29	98748.79					
Increase in 11 years	9625.90	2979.61	1301.40	14027.25	779.5				

The following table shows the number and value of different kinds of animals sold during 1917-1918. A total of 51 animals were sold for a total of \$3,051.90. Most of these animals were distributed in the state of Georgia. However, they have been shipped into the states of Virginia, North Carolina, South Carolina, Florida and Alabama. While the primary object of maintaining these herds and stud is to instruct the students, the dissemination of all valuable animals throughout the state will have an important bearing on improving the live stock in the different communities.

## Sales of Live Stock, 1917-1918

Kind	No.	P. B.	Grade	Price per head	Total value
Dairy cattle	15	7	8	\$ 58.79	\$ 881.95
Beef cattle	18	8	10	103.54	1,863.70
Hogs	18	4	14	15.07	271.25
Service fees					35.00

On account of the importance of food in the present crisis much of the College farm has been devoted to food and feed crops. The acreage for 1918 is as follows: Corn, 85 acres; silage, 42 acres; oats, 44 acres; winter hay, 23 acres; cotton, 24 acres; peas, 10 acres; rye, 17 acres; alfalfa, 14½ acres; tame grasses, 5 acres; grazing crops for hogs, 4 acres; total, 268 acres. Crops to be planted after oats in hay or rye: peas, 80 acres. Total crop acreage for the year, 348½ acres.

### Live Stock

Each year substantial progress is noted in the development of the herds and stud maintained on the College farm. There are 181 animals owned at the present time, 151 of which are pure breds. The total inventoried value of these animals is \$21,554.00. This is a striking contrast with the 42 animals owned by the College on September 1, 1907, none of which were registered and the total inventoried value was \$1,917.00. Furthermore, it should be remembered that during the last eleven years the annual outlay for the purchase of live stock has been \$1,128.48, while the annual sales have been \$1,885.78. This is an achievement worthy of note and demonstrates the latent possibilities in animal husbandry in Georgia. The average net yearly increase in inventory value of live stock is \$1,785.18. Thus it is seen that the annual sales of live stock and the increased value of the herds and stud amount to \$3,670.96. That is to say, the returns from live stock have been nearly three and one-half times the amount of money expended for purchasing breeding animals for the last eleven years.

#### Financial Statement of Live Stock for Last Eleven Years,

June 1, 1918.

Value of live stock on College farm Sept. 1, 1907-----	\$	1,917.00
Expenditure for purchase of live stock from Sept. 1, 1907, to June 1, 1918-----		12,413.18
Value of live stock June 1, 1918-----	\$	21,554.00
Sale of live stock from Sept. 1, 1907, to June 1, 1918 -----		20,743.60
Net increased value plus sales above expen- ditures for purchasing live stock-----		27,967.42
		<hr/>
	\$42,297.60	\$42,297.60

Average amount expended yearly for the purchase of live stock -----	\$	1,128.48
Average annual sales of live stock-----		1,885.78
Average net yearly increase in inventoried value of live stock -----		1,785.18

The inventoried value of live stock by years is shown in tabular form. The valuation placed on the animals is quite conservative

and it is confidently believed that they could be sold at substantially more than is shown in the inventory. It will be observed that at the present time the stock owned by the College is worth more than eleven times as much as it was September 1, 1907.

#### Value of Live Stock

	Value	Numbers	Per cent increase in value
September 1, 1907 - - -	\$ 1,917.00	42	
1908-1909 - - - - -	5,082.50	71	165.1
1909-1910 - - - - -	6,937.50	132	36.5
1910-1911 - - - - -	10,042.00	213	44.7
1911-1912 - - - - -	10,265.00	159	2.2
1912-1913 - - - - -	12,005.00	167	16.9
1913-1914 - - - - -	13,580.00	170	13.1
1914-1915 - - - - -	14,532.00	163	7.0
1915-1916 - - - - -	17,310.00	145	19.1
1916-1917 - - - - -	19,870.00	146	14.8
1917-1918 - - - - -	21,554.00	181	8.4
Total increase 11 years	19,637.00	139	1,024.3

Receipts from the dairy herd are shown in tabular form for an eleven year period. In addition to the receipts of \$10,750.34, it should be remembered that \$881.95 worth of animals were sold from the dairy herd, making gross receipts from the dairy herd of \$11,632.29 for the year. It will be observed that material improvement has been made in the productiveness of the dairy cows. The increased volume of business is due to greater capacity and not to a greater number of individuals maintained in the dairy herd. It will be noticed that in the beginning the average return per cow was only \$86.49. This has shown a steady increase until for the past year the annual return per cow was \$271.26.

The net profit on the dairy herd was \$3,711.38. In the financial statement no credit was given the dairy herd for the value of manure produced. At prevailing prices of all commercial fertilizers, it is safe to estimate that the value of manure was at least \$40.00 per cow per year, making an additional revenue of \$1,600.00 for 40 cows in the herd. The inventoried value of the herd June 1, 1918, was \$705.00 more than it was on June 1, 1917. Thus it is seen that in addition to the profit of \$3,711.38 the herd has actually earned \$3,186.95.



### Receipts from Dairy Herd.

	Total Receipts	No. Cows	Return per cow
June 1, 1907-1908 -	\$ 1124.44	13	\$ 86.49
June 1, 1908-1909 -	3891.40	30	129.71
June 1, 1909-1910 -	4331.02	30	144.37
June 1, 1910-1911 -	4346.87	30	144.89
June 1, 1911-1912 -	5099.44	32	159.35
June 1, 1912-1913 -	5675.46	32	177.36
June 1, 1913-1914 -	6036.57	34	177.53
June 1, 1914-1915 -	6562.60	34	193.01
June 1, 1915-1916 -	6700.41	35	191.44
June 1, 1916-1917 -	7392.04	36	205.33
June 1, 1917-1918 -	10750.34	40	271.26
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Total increase 11 years	\$ 9625.90	27	\$ 184.77

At the present time eight breeds of pure bred live stock are being maintained on the College farm including four pure bred Percheron horses, thirty-two pure bred Jerseys, twenty-nine pure bred Holsteins, twenty-five pure bred Shorthorns, eighteen pure bred Herefords, twenty-one pure bred Berkshires, twenty-two pure bred Hampshires, and three pure bred Poland-Chinas.

### Improvement of Plant

No new buildings have been added during the year in as much as all of the available funds were needed in making certain necessary improvements in the different divisions. The Division of Agricultural Education was housed in Compton Hall and sufficient facilities were provided to take care of the classroom and the laboratory work for the time being. However, with the greatly increasing interest in this particular line of work it seems that more accommodations will have to be provided at an early date.

A large amount of laboratory equipment has been given to the Division of Agricultural Engineering in order that it might take care of the men that have been sent to us by the Government for training. Some equipment has been added in preparation for the new course in Home Economics which will begin this fall and it will be of service during the summer school courses.

You will observe that all of the buildings have been maintained in first-class repair. This has cost a considerable sum in as much as the necessary materials have greatly increased in price. A large amount of tile drainage has been placed under the experiment plats and this work will be continued in order that certain very valuable lines of research work may be carried out and experiments which have been begun carried to completion. Considerable improvements have been made in the equipment of every division.

## Campus

Lumpkin Hill is growing more beautiful every year. Crowned as it is with the main College building, surrounded by groups of native trees and shrubs and flowers, it is indeed one of the beauty spots of Georgia.

Few new plantings have been made during the year. Trees and shrubs have been well cared for, the lawns well mowed, and those visiting the institution for the first time are surprised to see what can be done with native plants. It is desirable to have the landscape as near like nature as possible. Walks and drives, of course, are necessary evils which serve the purpose of keeping pedestrians and vehicles in proper limits.

We wish the campus to be an object lesson to all who visit it. Especially do we wish to impress the students with the value of home and school decorations, so that they will go out from their Alma Mater filled with a determination to make their homes, their schools and their communities glad with nature's clothes of trees and shrubs and flowers. So few people realize that the presence of vegetation not only beautifies but makes a home more healthful. Every green thing is helping to purify the air, and pure air is one of the greatest enemies of disease given us.

The formal garden is, for the most part, well filled with perennial flowers. Two severe winters have had their effect, but in spite of the cold most of the beds are filled up with bloom.

The woodland about the hill is being mowed, so that all weeds and undergrowth are cleared away. A few dead trees have been removed also. The whole hillside has the appearance of a park. Some of the slopes to the east are being covered with young trees, and back of the Agricultural Engineering building some new grasses are being planted.

## Roads and Drives

A new link in the River Drive is now under construction and will be completed at an early date. The new link begins just where the present link joins the drive through the horticultural grounds, crosses a small stream flowing into the river, passes through the farm and joins one of the main roads at the concrete culvert beyond the main barn.

The roads were projected so as to make the buildings and barns accessible to the public and at the same time emphasize the natural beauty of the campus. At the present time there are two laps of the river drive yet to be built and one lap of the drive to connect the present system of roads with the Whitehall Road and bring closer about twenty acres of land now under cultivation but somewhat inaccessible.

The main drive leading from Lumpkin Street to the administration building of the College has been widened and changed and

other improvements made in the vicinity of the greenhouse. All of these improvements were much needed and it is gratifying to see how the people of Athens and the thousands of visitors who annually come to inspect the plant are using our roads as pleasure drives and our campus as a park. Nothing so impresses the visitors as beautiful boulevards and, when the roads now projected are completed, we will have a beautiful and complete set of pleasure drives. All of these roads should be built and the necessary improvements made as soon as possible.

### **Prizes, Scholarships and Gifts**

Eight loans of \$100 each were made to students in 1917-18 through the courtesy of the Georgia Banker's Association and this money is to be returned to the loan fund at four per cent interest. Under the same terms the interest accruing from the William Wilson Finley Foundation fund, donated by the Southern Railroad, has been loaned to worthy students.

The Cotton Seed Crushers' Association of Georgia has given \$2,000 to be spent in making further determinations on the oil content of cottonseed and the results secured have been given out in bulletin form. To the Division of Engineering has been loaned \$8,000 in equipment and to the Division of Animal Husbandry considerable donations and loans have been made by concerns manufacturing dairy machinery. Two Hampshire hogs, worth \$100 each, have also been donated to the Animal Husbandry Division. The Horticultural Division has received donations of spray materials and spray equipment for use in giving numerous demonstrations over the state.

For extension and research work we acknowledge donations from the following: from Polk County \$125; from Hall County \$50; from the Georgia Florida Railroad \$208; from the Savannah Cotton Exchange \$250; from the Georgia State Fair \$773; from the Virginia Carolina Chemical Company \$500; from H. G. Hastings & Company \$500; from Floyd County \$400; from Clarke County \$1,388.93. According to the treasurer there has been received during the last year \$6,569.05 in prizes and premiums which have been given by boards of trade, county commissioners, women's clubs, railroads, fair associations and public spirited citizens interested in agriculture. These prizes, scholarships and premiums have made possible the short course for boys and girls at the College, have aided ambitious young men in paying their way through college, and have stimulated hundreds of agricultural club members to do better and more thorough work. It would be impossible to acknowledge singly in this report all of the contributions that have been made and the courtesies rendered the College by its friends during the year, all of which has meant a material saving to the state. However, for all of them the College is indeed grateful and appreciates the fine spirit in which they were given.

## The College of Science and Engineering

My last annual report carried an earnest portrayal of the importance which attaches to the facilities and instruction in engineering lines by a state institution like this, particularly in the light of this world war wherein the ultimate decision may largely turn upon the results of scientific research and inventions, and wherein the enormous destruction wrought is leaving a gigantic task of rehabilitation and economic solution of construction problems of every kind. I would ask that you refer again to that full statement which events of the past year have emphasized directly in the demands which the War Department has made upon our technical facilities. We have been asked to undertake a number of lines of special technical training for enlisted men, and we have not been able to do so.

Hampered by the lack of necessary buildings and limited equipment, we have been unable to respond to the urgent demands made upon us on anything like the scale desired by the Government, or comparable with our desire for real service. This has been notably felt in the matter of courses in military engineering, in electrical and civil engineering specialties, in radio work and applied physics, all of which activities are curtailed by lack of adequate laboratories, shop room, and equipment. The three story building, 100x50 feet, known as Moore College, the gift of the City of Athens to the A & M College forty years ago, houses all of these departments. The space has been inadequate for the large classes of undergraduates seeking special preparation for war service throughout the year, and is now overflowing with the men of the special training detachment accepted only in limited number, with the war department offering and asking us to take three or four times the men we can now accommodate.

Under the stress of a war which brings to bear every resource of applied science in the effort for victory, the country is beginning to see what the full function of the A & M College is, in the life of the nation. It should be a completely organized and equipped plant of applied science upon which the Government can call in emergency, and upon which it can rely to furnish leaders to rebuild and replenish the wastes of conflict.

I conceive it to be the part of wisdom not to hold back and hesitate in expanding and fully equipping these colleges right now. A policy of retrenchment and hesitation in this matter savors of distrust of ourselves, distrust of the outcome of the struggle, and of blindness to the evident and immediate needs which must follow the victories to which we look. The states should come to the support of their A & M Colleges with liberality and full vision of the future and equip them now for a maximum of service. Hence, it seems the sane and reasonable thing to do is for the state to appropriate at least \$40,000.00 to be expended in erecting two large



wings attached to Moore College, and \$10,000.00 for equipping and maintaining the same for the use of the schools of civil and electrical engineering and of physics in its applied branches. Such expenditures will most economically result in a large and impressive structure with 12,000 square feet of additional floor space and laboratories, and with a large increase of facilities and equipment for engineering instruction, needed to round out the opportunities which the College should be able at this juncture to offer to the youth of Georgia, and which it can use directly in aid of the War Department in training its fair share of more than 100,000 technical men which the present program of the War Education Board deems necessary for the army.

### **The Executive Office**

The regular administrative work covering the activities of the institution not only in Athens but also in the field has been given my close personal supervision and attention. There is no single phase of the work of the College with which I have not made myself familiar and I trust that this report bears out my assertion.

The College is growing rapidly and each year the staff increases to meet new demands for special work. Last year we had a staff of 237 men and women, while this year we have 307, representing an increase in workers of twenty-nine per cent. The administrative, technical and extension staff located in Athens numbers 81, while in the counties over the state are 113 county agents and 113 home demonstration agents. When you realize that with the organization of the College eleven years ago there were but seven people on our staff and that today there 307, with several of our divisions larger than the entire College was at its foundation, you see how remarkable has been the growth of the institution, the destiny of which you are shaping. The esprit de corps of this large body of workers has been fine and their loyalty to the institution and to the agricultural welfare of the state has been manifested in the sacrifices they have made for the cause. I regret that proper propriety forbids me to mention many individual instances that have come to my attention. They have faithfully discharged their duties and the records which they have made warrant, I believe, your commendation and approval.

All of the seventeen projects under the Smith-Lever Act which were reported on last year have been continued with uniform success and one new project, plant pathology, has been added. Several of the original projects have been expanded and new men have been added to meet the needs of the situation.

A detailed statement of all moneys received by this institution and disbursed by your direction through Mr. T. W. Reed, a properly bonded officer, Treasurer of the University of Georgia and also Treasurer of the State College of Agriculture, under the terms and

provisions of the Conner Bill, which created and established this institution, is printed as an addendum to this report as a matter of information to all who may be interested in the financial status of the institution.

The Treasurer's report is presented under two heads. First, receipts and disbursements for the maintenance of work conducted under the head of State Extension Activities. Second, the receipts and disbursements of all funds available under the Smith-Lever Act for salaries, labor, et cetera, and on the basis of the projects we are required to establish and maintain in accordance with the Memorandum of Agreement signed by your direction with the Secretary of Agriculture on June 15, 1914. The Trustees of the University of Georgia require the Treasurer to print and distribute a financial statement each year. The data presented is taken from this report.

In addition to the above the Chairman of the Board of Trustees of the University of Georgia, the Hon. Henry D. McDaniel, presents each year to the Legislature through the Governor, a financial statement of the receipts and expenditures of this institution, including a statement of the salaries paid to all employees other than those working cooperatively with us through the Memorandum of Agreement cited above, and whose salaries are therefore paid directly by the Treasurer of the United States of America. In other words, this financial statement accounts for all funds received and disbursed by our Treasurer but does not include the amounts paid to persons employed in the Extension Division whose salary, travel and incidental expenses are defrayed out of funds which may be termed indirect Congressional appropriations to Georgia, or by the counties, towards the maintenance of men and women county agents. Since these funds are not handled by our Treasurer, it is manifestly impossible for us to account for them. However, in obedience to the mandate of the Legislature a detailed statement as required under Section 5 of Act 191, known as the General Appropriation Act, has been prepared and handed to the Governor and is presumably available to all who wish to secure further information concerning the support of our extension work from funds other than those provided by direct appropriations from the state or the Federal Government.

Through the executive office is handled an ever increasing amount of correspondence as the people of the state discover the many services that the College may render. The expert experience of its staff is proving a valuable asset to many well organized businesses of the state and people generally are more than ever seeking the aid and advice of our technical staff in meeting the problems that come up for solution. Georgia is predominantly an agricultural state and it is therefore only natural that this institution should have the privilege of serving the major part of its population.

While the College is located in Athens, yet the sphere of its

activities is only bounded by the confines of the state. It is an institution with a state for its campus and one that is not only training a strong body of students for agricultural leadership but one that is carrying through its extension division agricultural information and instruction to the farmer, his wife and his children. This year 804 long and short course students have been given instruction at the College, approximately 19,000 boys and girls have been instructed in club work, 6,000 women have been trained in community clubs, thousands of farmers have cooperated with the College in carrying out 34,403 demonstrations, and approximately 240,864 people have been given training in extension meetings. The people in response to this service have shown everywhere a genuine spirit of appreciation and today the work of the College finds itself strongly entrenched in the hearts of an ever widening circle of friends. Numerous letters have reached the executive office expressing the confidence of the people in the work we are doing.

Though the duties of the executive office have been exacting, still I have found time to meet with the people in different parts of the state and discuss with them the question that has done so much to make us less selfish, more brotherly and more American. That question is the production and saving of food for our soldiers and sailors and our fighting associates abroad. In all of my speeches I have found the people of Georgia to be extremely sympathetic and anxious to do all those things which lead to victory and to peace. I have been privileged to speak to our people at Lawrenceville, Columbus, Forsyth, Winder, Augusta, Waycross, Quitman, Macon, Cordele, Fitzgerald, Savannah, Millen, Louisville, Sandersville, Commerce, Rome, Atlanta and other points on food production and conservation. Special papers were prepared on "Agricultural Engineering at Land Grant Colleges" and "How Land Grant Colleges May Organize to Serve the Government in the War Emergency," and they were delivered before the Association of American Agricultural Colleges and Experiment Stations, in Washington. A special lecture with display charts was prepared on "Georgia's Part in Food Production in 1918" and was first delivered in Macon. A new set of charts were prepared on "How and What To Save" and these were used as a basis of a talk before the Wholesale Grocers' Association. A third charted lecture on "Why We Are Fighting Germany" has been delivered to a number of representative audiences.

By your direction I assumed the office of Federal Food Administrator for Georgia. I am thankful to have been deemed worthy of discharging the duties of this most important and essential office. The burden of work and responsibility imposed is very heavy. Considering myself a privileged citizen, however, and afforded a special opportunity to serve the state and nation acceptably in the hour of crisis, I have gladly thrown myself into the breach with all the energy and enthusiasm that I possess.



You may gain some idea of the magnitude of the work of the Food Administration in Georgia when I tell you that more than two hundred men and women, chiefly volunteers, are engaged in promoting the various lines of activities which naturally center around it. Five special stenographers in Athens and as many more in my Atlanta office are employed to do the clerical work, while more than thirty other persons selected because of their special knowledge are aiding in the direction of the general administrative work conducted through the general administrative office in Athens and the enforcement, police and regulatory office in Atlanta.

Every member of the staff, 307 men and women, have been members of the Food Administration and have given most excellent service in carrying the gospel of food production and food conservation to the people.

Immediately upon the declaration of war and before the Food Administration had been organized the College placed itself upon a war footing and went into the field to win the state for increased food production. Under this leadership and with the cooperation of all the other agricultural forces of the state Georgia raised, besides a normal crop of cotton, the largest food crops in her history. The records show that the peanut crop increased from 1,240,000 to 9,435,000 bushels, the corn crop from 62,000,000 to 72,000,000 bushels, the Irish potato crop from 900,000 to 1,596,000 bushels, and sweet potatoes from 7,520,000 to 11,625,000 bushels. Then, in cooperation with the Food Administration our people were taught not only what but also how to save. Under the direction of the home demonstration agents the Canning Club girls filled 1,254,966 containers with surplus fruits and vegetables worth approximately \$267,756 and our club women dried, brined and canned products worth \$665,566.90. Just how well our people were taught to save wheat, meat, fats and sugar is a matter of history and to their honor be it said that Georgia has been officially recognized as being better organized for food administration work than possibly any other state in the Union.

What has been accomplished by the Food Administration through the whole-hearted support of the nation to the general food program few people realize. From July 1, 1917 to June 1, 1918, the United States exported to the Allies 100,000,000 bushels of wheat and wheat flour. This was made possible only through the concerted saving and conservation in the homes of our people. Georgians have made a noble and patriotic response to every request and suggestion of the Food Administration, and it is to their glory and to their credit that the Food Administration has in the last few weeks been able to provide for the assignment of approximately 40,000,000 lbs. of flour to the Allies. This is probably the largest contribution of flour which any state has made to the cause and it was accomplished first, through limiting the shipment of flour into Georgia and sec-



ond, by the aggregating and shipping abroad through the port of Savannah of over 50,000 barrels of flour collected within the state. This is but one example of the magnificent and patriotic cooperation of our people with the government.

In the saving of meats the country has done well. The United States exported 20 per cent more beef products in March, 1918 than in any previous month in the last seven years and more than twice as much as the highest amount exported in any month in the four years before 1915. The home demonstration agents of the College were zealous workers in teaching our people both in the country and in the city how to save meats and fats and still maintain a well balanced dietary.

When the Food Administration was established May 15, 1917 the wholesale price of flour per barrel at Minneapolis was \$16.75 and it was going higher every day. On May 4, 1918, the price was \$9.80, a decrease of \$6.95 per barrel or 41 per cent. By this reduction in the price of flour alone the people of Georgia have been saved at least \$6,000,000 on their flour account. The reduction of the wholesale price of refined sugar from 8.33 cents per pound in April, 1917 to 7.3 cents in April, 1918 represents an aggregate annual saving in sugar to the people of the state of approximately \$2,250,000. From the foregoing figures it is seen that the Food Administration has not only been the means of furnishing supplies to the allied armies and feeding a large civilian population, but it has also served our own people and saved for them many millions of dollars. By encouraging Georgia to raise greater food crops it has made her people more self-sustaining and has prepared them for the shock of the fierce economic and industrial struggles that will come with the dawn of peace.

All patriotic Georgians have reason to feel proud of the record which our state has made in food production and food conservation. The Federal Food Administrator, the Hon. Herbert Hoover, recently expressed his appreciation of what had been done in Georgia in the following communication.

"Please express to the people of Georgia my sincere appreciation of their patriotic action in the observance of a wheatless week. Such wholehearted response to our request is most gratifying and justifies my confidence that the American people will voluntarily save sufficient food for our army and the allies without rationing or other burdensome regulations. I congratulate you and your staff on Georgia's achievements."

### Inventory

In making the inventory for 1918 deductions for deterioration have been made in all cases and I believe it well represents the value of the property and equipment which has been assembled under your direction. The main buildings have been returned at the same figure as in former years, and I am frank to say that they could

not be replaced at this time at anything approximating the original cost. For your information I now present the inventory showing the disposition of all property and equipment.

Land, 830 acres -----	\$169,500.00
Main building -----	135,000.00
Power house, including heating plant, light, water, plumbing, sewerage, gas, and sidewalks-----	33,250.00
Division of Agronomy, including barns, houses and dem- onstration field equipment -----	16,052.78
Photographic room equipment -----	340.00
Division of Forestry -----	4,845.10
Division of Horticulture, including barns, grounds and other equipment -----	21,326.00
Extension equipment and exhibit cases-----	7,734.97
Division of Agricultural Chemistry, including soil labora- tory -----	6,711.93
Division of Agricultural Engineering including laboratory	40,472.33
Division of Veterinary Medicine, including hospital and serum plant -----	22,840.48
Division of Poultry Husbandry, including buildings----	14,450.00
Division of Animal Industry, including dairy-----	5,023.00
Library -----	6,827.90
Livestock on farm -----	22,759.00
Farm buildings, barns and tenant houses-----	25,416.21
Tools and implements-----	3,067.25
Division of Agricultural Education, including building and equipment -----	9,968.48
Total -----	\$545,585.43

From the inventory you will see that there is approximately \$545,585.43 worth of buildings, grounds and equipment under your supervision. This represents an increase in total value of \$12,407.98 over last year and this is accounted for in materials and equipment principally. No new buildings have been added this year and those now owned by the College are valued at more than \$200,000. While considerable equipment has been added in some departments there are still others that need a great deal more in order to fully serve the students for laboratory and research work. The equipment of the Division of Agronomy is \$16,052.78, Division of Forestry \$4,845.10, Division of Horticulture \$21,326, Division of Agricultural Chemistry \$6,711.93, Division of Agricultural Engineering \$40,472.33, Division of Veterinary Medicine \$22,840.48, Division of Poultry Husbandry \$14,450, Division of Animal Husbandry \$5,023, and the Division of Agricultural Education \$9,968.48. The total value of the livestock on the farm is \$21,554.00.

The roads, to which we are making a substantial addition by completing another lap of the river drive, represent a very valuable asset which was not counted in the inventory. These fine roads have all been built without any monetary outlay to the state through a cooperative agreement between the Board of Trustees of the Georgia State College of Agriculture and the Commissioners of Roads and Revenues of Clarke County. They make easily accessible a

productive and well tilled farm that ten years ago was worn and gullied, but today is visited by thousands of visitors every year for its beauty.

### Needs of the College

Economy has been the watchword in the spending of all the funds appropriated for the College, but the increase in the price of necessary materials and supplies has been so great that we find ourselves face to face with a financial situation whose only solution is an increase in maintenance funds. A rigid examination of accounts will reveal the fact that we have made an enviable record in the matter of purchases and disbursements, and however much we may stretch our income we cannot fulfill all the obligations that will devolve upon us.

Two new divisions, Agricultural Education and Home Economics, have been added and we are being called on to meet certain federal funds, dollar for dollar. Besides this we must provide additional office accommodations and laboratory equipment to meet the normal growth of the institution solely from college funds.

It seems that a number of young ladies will register in September for the course in Home Economics and, in face of the great demand by the government for the higher training of women along technical lines, we cannot afford not to provide suitable laboratories and classrooms for their reception. The woman of tomorrow must be more thoroughly trained in the fundamental sciences that underly nutrition, dietics and home nursing. One of the distressing shortcomings of our great nation as brought to light by the examination of our young men for military service was this, that thousands and thousands of our brightest young men were suffering from malnutrition, and that this condition could have been easily corrected in the home by a well balanced dietary. Our people must be taught how to prevent waste and how to use bread substitutes, or in the fierce industrial struggles that will follow this war we, as a nation, will suffer sorely. Adequate maintenance funds for the courses in Home Economics should be provided.

In deference to the demands of the Army for more veterinarians for military service and in order to provide the growing livestock industry of our state with sufficient practitioners to satisfactorily care for the animals, we have extended our courses in Veterinary Medicine and are now offering a degree to men who complete the four-year course. Army service has withdrawn a large number of veterinarians from the field and even before this there was a shortage of trained men in this particular profession, especially in Georgia. At the present time, as has been shown already in another section of this report, but 37 of the 152 counties of the state have graduate veterinarians, and these men, so widely scattered, must care for approximately \$159,000,000 worth of livestock. As a mere



matter of business and as insurance against the diseases which are annually causing the loss of millions of dollars in Georgia alone, and as a sane form of conservation, we must maintain standard courses in veterinary medicine.

The government is giving generously of its funds in the support of extension work, the United States Department of Agriculture having assigned Georgia during the last year an extra war emergency fund of \$107,000. However, this fund and Smith-Lever funds are so hedged about and restricted as to disbursement that none of this money can be used for maintenance, but the College must with state funds provide the necessary office room and other facilities. Now, during the last year the extension force has been increased forty-five per cent, and thus it is manifestly impossible for the College to furnish suitable accommodations for this growing division and provide for the legitimate growth of the institution along other lines without a reasonable increase in maintenance funds. A college without any monetary needs is not capable of performing acceptable service to a rapidly growing state like Georgia.

The College of Agriculture has reached a critical point in its development. So large an institution as this cannot stand still, but must either go forward or backward. As I said to you in my last annual report, it is impossible for the College to be everybody's financial burden bearer and the time has come when the maintenance appropriation must be reasonably increased or the College will not be able to render its best service and do its full duty. After a careful review of the situation, I believe you will agree with me that \$80,000 for general maintenance, \$10,000 for the course in Home Economics, and \$10,000 for the new degree courses in Agricultural Education and Veterinary Medicine is indeed a modest request in view of the great needs which I have outlined to you.

At the present time we are training by request of the government one hundred and sixty men for special military service work in carpentry, forge work and auto mechanics. The authorities have signified their willingness to send us as many more men as we can adequately provide for, and I trust you will pardon me when I say that I do not believe we will begin to do our full duty in this war emergency work until we are training for special military service 1,000 to 1,500 men at the College of Agriculture. In order to provide the necessary laboratory space and equipment, and train these men thoroughly, we will need at least \$100,000. Other states and institutions are doing a great deal more for their men as is seen in the case of the University of Texas where \$400,000 is being spent in training men for special military service.

We not only can render an invaluable service to our government at this time, but we can also prepare for the training and rehabilitating of the wounded Georgia boys who will come back to us from the Western Front. The United States Senate Committee on Edu-



education and Labor considers as one of the most important problems growing out of America's participation in the war, the finding of a place in industrial life for the soldier who returns from France maimed or otherwise debilitated by service at the front. Said Dr. C. A. Prosser, director of the federal board for vocational education, a short time ago in testifying before the Committee: "Even before our men have left the hospital they must be heartened and made to realize that there is something in the world they can do. There must be something with which they can occupy their time as citizens, no matter how generous the compensation paid them by the national government. They must be prepared, as the example of our allies has showed they can be prepared, for happy and useful employment.—There is the moral effect upon the man. He must be 'bucked up.' He must know that he is not destined for the waste pile of life." I know you, as trustees, feel that we cannot do too much for these boys who are taking all the risk and enduring all the suffering in order to save the state and nation. First, we must train our men to die for their country and for victory, and then when they come back we must teach them to live for their country and for peace.

The experience of Canada shows that one per cent of the men sent abroad will require the benefits of this reeducational service, and it also shows that agricultural colleges and trade schools are the natural and proper places where this vocational training should be given. I trust you will so emphatically call this matter to the attention of the General Assembly of Georgia that immediate steps will be taken to train a larger and larger number of men for special military service, and to prepare to rehabilitate those men who will be permanently injured in the fighting.

The 1917-1918 appropriation by the government for Smith-Lever work was \$77,129.25 and the state appropriation was \$67,129.25. the initial ten thousand dollars provided in the bill not requiring an offset. The state has alined itself with this particular class of agricultural service work and it is confidently expected that the extra federal appropriation of \$20,977.91 accruing this year will be offset dollar for dollar with a like amount of state funds, as the national act requires. It is needless for me to again point out to you the magnificent service that is being given the state by our force of county agents and home demonstration agents.

Permit me to call to your attention again the pressing need of the institution for an appropriation of \$60,000 with which to erect a suitable building for our animal husbandry division. Georgia already ranks as the sixth hog producing state in the country and this fact coupled with the great increase being made in other lines of livestock development fully justifies an expenditure in this direction for the training of stockmen within the state. The work of the division can never be properly coordinated nor can the needs

and requirements for the instruction of the young men of Georgia be successfully met until a special structure is provided wherein needed equipment may be assembled for livestock judging. At present our young men are often compelled to judge stock in the open during cold and rainy weather and this should not be. We find that many of our young men are turning to other institutions where they may secure wider experience in the handling of livestock than our present limited facilities permit. The Georgia Dairy and Livestock Association, the State Horticultural Society, and the Breeders' Association of Georgia are all anxious that this building be erected and a representative committee of farmers and stockmen have been appointed to bring this matter to the attention of the General Assembly of Georgia. I trust that they shall have your earnest endorsement in the matter and that you will aid in carrying the plan into effect.

The Mack property, lying contiguous to the poultry plant, is owned by negroes and constitutes a nuisance in the proper development of that department. It would take about \$10,000 to purchase this property and a small amount of other property owned by negroes in the section. I trust that you can find ways and means of accomplishing this most desired end.

The dormitories of the University provide for only one hundred and fifty students while the remaining five hundred, or more, have to seek accommodations in the city of Athens. The three dormitories, Candler Hall, New College and Old College, have only 72 rooms. A few rooms are available in Denmark Dining Hall, Lumpkin Hall and Lucas House. However, counting all of the dormitory space, the accommodations are far from adequate and especially since there will come to us this fall a number of young ladies to enter the course in home economics.

The normal life for the college young man and young woman is in the dormitory. Every year hundreds of young men, who prefer the dormitory life and are anxious to enjoy the close fellowship which it cultivates, are forced to take rooms in all sections of the city, often times at such a distance from the dining hall and the classrooms to be decidedly inconvenient. Again, the dormitories allow the student to live much cheaper than he could elsewhere. Plans and specifications have already been prepared at the College of Agriculture for the building of a comfortable and convenient one-hundred-room dormitory, the need of which is not only imperative but also exigent. A dormitory with a dining hall in conjunction with it in which every meal is worked out with scientific exactness would be an especially valuable adjunct in furnishing laboratory practice for the young women in home economics work. The dormitory situation is so bad as to need remedying in the immediate future by the building of at least two up-to-date structures in order that we may keep pace with the more

progressive educational institutions of the state and provide home-like quarters where sons and daughters of Georgia farmers may be housed and fed at a reasonable cost. Until suitable dormitories are provided, a large number of men and women will be prevented from taking full advantage of the opportunities which the College offers for obtaining the special training which they must of necessity have in order to serve the state and nation most acceptably.

### Resumé

The College of Agriculture closes the eleventh year of its history with an enviable record behind. It is clearly impossible for an institution employing 307 men and women, whose activities completely cover the state, to present a report in condensed form without doing itself an injustice. On close study it will be found that the seeming details of this report are very vital statistics when they are measured in terms of their ultimate effect upon the people of Georgia.

At a time like this, it seems to me, no better criterion for judging an educational institution can be found than the record it has made in helping to win the war. In addition to the regular work of the College our professors, our students, and our extension men and women have been a unit in carrying on the fight in the home trenches. Please allow me to repeat for your information a summary of their war activities.

### Special War Activities

1. Twenty-seven professors and specialists of the Georgia State College of Agriculture and twenty-two of its county agents have volunteered and are now in the military service of the United States.

2. In the halls of the administration building of the College flies a service flag of 276 stars in honor of its staff members, alumni and students.

3. At the present time eighty men are being trained in auto mechanics, forty in forge work and forty in carpentry that they may do specialized work in the National Army. It is confidently expected that the number of men in training will soon be materially increased.

4. The president of the College of Agriculture is serving as Federal Food Administrator for Georgia and associated with him in the work are all the members of the college and extension staff.

5. In response to an exigent need for agricultural leadership the College will remain open all the year. There were in attendance upon the food production and food conservation courses given in January 223 men and women. Twenty high school superintendents and county school superintendents are at the College now taking vocational agriculture and thirty others will come to us for the Summer School. A special tractor school will be held in July.



6. On the College farm there was produced in 1917-18 \$15,826.28 worth of food crops, livestock and milk. The dairy manufactured \$3,569.94 worth of butter and the poultry plant produced \$3,187.19 worth of eggs and chickens.

7. Of the 268 acres of cultivated land on the College farm 24 were in cotton.

8. Georgia boys and girls in club work produced in 1917 \$1,069,326 worth of corn, pigs, calves, chickens and general farm crops. Club women dried and brined products valued at \$665,566, raised poultry products valued at \$16,339.85 and produced \$923,823.59 worth of vegetables. Thus, through the agricultural clubs there was added approximately \$2,675,055.35 to the potential wealth of the state.

9. The membership of the agricultural clubs has increased from a total of 18,616 boys and girls in 1917 to 28,190 on May 15, 1918.

10. The College surveyed and drained 30,023 acres of Georgia bottom land in 1917 which is now planted in food crops that when sold will add approximately \$1,801,380 to the aggregate wealth of the state.

11. During the year 129,933 hogs were treated for cholera by county agents and 4,444 cattle were also treated for other diseases.

12. At the request of the Government county agents took orders from Georgia farmers for 50,000 tons of nitrate of soda and arranged for its payment through local banks.

13. Special charts, posters and bulletins were prepared for the Fuel Administration. Assistance is being given the government authorities in locating supplies of wood for war activities.

14. There was prepared and distributed by the College for the information of the people of Georgia a total of 1,912,000 pages of material bearing specifically on war service work, 40,000 college war posters, and numerous food administration articles in plate form for one hundred and thirty weekly newspapers. The library gathered a most complete set of books on foods, food values and food conservation.

15. During 1917-18 there were held 2,233 field and extension meetings under the auspices of the College with an estimated attendance of 240,864.

From the foregoing report you will see that our entire organization has been thoroughly organized for war service and has been able to accomplish a great deal along many and varied lines. It is a pleasure and a privilege for me to express my sincere appreciation to the members of the staff for the active, sympathetic and considerate manner in which they have performed every service and obligation resting on them. They have proven themselves true patriots and worthy of your entire confidence in giving leadership to the agricultural forces of the state.

I am pleased to tell you of another year of happy association with



the Chancellor of the University. He has given the work of the College his cordial support and has at all times shown himself to be a true and tried friend of the institution. His earnest encouragement has helped me over many rough places. I deeply appreciate the intimacy of my association with him and the rare privilege I have enjoyed in his confiding friendship. The dignity of his life and the high plane of his service have elicited the love, sympathy and esteem of the entire staff.

The eleventh year of the history of the institution since its reorganization draws to a close and the record of its activities lies before you. It faithfully presents, I believe, the work of an active, loyal and patriotic corps of agricultural men and women.

I am happy in that I have been permitted under your wise guidance, mature judgment and uniform courtesy to direct the affairs of the institution along broad and cosmopolitan lines with a certain catholicity of viewpoint that has marked it as a leading and progressive institution. Thanking you for your most cordial support and sympathetic cooperation, I am

Very respectfully,

ANDREW M. SOULE, President.



**\*ADDENDUM A.**

# Report of the Treasurer of the Georgia State College of Agriculture for the Year Ending May 27, 1918

## RECEIPTS.

Balance May 28, 1917-----		\$ 1210.28
of Georgia—Maintenance and extension work,		
including Farmers' Institutes-----	\$105740.00	
Receipts -----	5076.28	
Receipts -----	10750.34	
Laboratory Receipts -----	13769.13	
Receipts and Fees -----	442.50	
Husbandry Receipts -----	3187.19	
Culture Receipts -----	2374.48	
Culture Laboratory Fees -----	200.00	
ary Laboratory Receipts and Fees-----	1000.20	
stry Laboratory Fees-----	555.00	
School Receipts and Fees-----	544.97	
Experiments Receipts -----	24.00	
Field Experiments Receipts-----	1285.93	
Laboratory Receipts and Fees-----	68.28	
Annual -----	39.70	
Cultural Engineering Laboratory Fees-----	242.00	
Husbandry Laboratory Fees -----	255.00	
ary Receipts -----	3569.94	
ntigent Fund—interest on deposits-----	528.18	
Bankers Loan Fund -----	800.00	
Fund Income -----	50.00	
onal Education Funds -----	1324.89	
ons for exhibits, prizes, corn club work, canning		
club work, pig club work, demonstration work,		
Scholarships, etc. -----	13033.98	
unds to Various Accounts -----	783.19	
	<hr/>	\$165645.18
		<hr/>
		\$166855.56

## DISBURSEMENTS.

ces -----	\$ 36994.59
age and Stationery -----	730.85
-----	4776.85
rtizers -----	870.50
Stock -----	483.18
ol and Implements-----	506.95
ecStuffs -----	3229.92
ellaneous -----	1133.48
tt School -----	842.02
in -----	1015.96
awling Expenses -----	678.12
roomy -----	891.15
griculture Laboratory -----	357.15
etry Laboratory -----	950.08
gricultural Engineering Laboratory -----	593.53
gricultural Husbandry Laboratory -----	315.41

Chemistry Laboratory -----	981.03
Veterinary Laboratory -----	1459.16
Library -----	643.21
Building and Repair -----	375.12
Horticulture -----	3121.37
Grounds -----	1355.88
Field Experiments -----	558.71
Heat, Light and Water -----	1540.72
Janitors -----	818.28
Contingent -----	3880.45
Publications -----	528.22
Agricultural Education Laboratory -----	735.85
Poultry Husbandry -----	3193.03
State Supplemental Fund (balance transferred to Smith Lever account -----)	1.36
Creamery -----	3490.20
War Fund—training United States soldiers under government agreement -----	1461.36
Extension Salaries -----	22849.16
Extension Publications -----	383.47
Boll Weevil Fund -----	2035.20
Extension Postage and Stationery -----	525.86
Extension Traveling Expenses -----	1196.59
Agronomy Extension Traveling Expenses -----	2180.51
Agronomy Extension Equipment -----	445.41
Horticulture Extension Traveling Expenses -----	924.02
Horticulture Extension Equipment -----	261.94
Animal Husbandry Extension -----	1147.00
Poultry Husbandry Extension -----	791.12
Soil Survey Laboratory -----	934.14
Soil Survey Traveling Expenses -----	1018.95
Extension Contingent -----	2050.56
Farmers Institutes -----	2772.77
Extension Janitors -----	1011.57
Boys' and Girls' Clubs -----	697.95
Extension Heat, Light and Water -----	1921.92
Extension Field Experiments -----	1732.50
Cotton Investigation -----	899.15
Prizes -----	336.79
Forest Club Annual -----	93.00
Georgia Bankers Loan Fund -----	812.00
H. G. Hastings Fund -----	304.02
Meriwether County Demonzstration Fund -----	64.16
Clarke and Oconee County Demonstration Fund -----	433.30
Clarke County Home Economics Fund -----	100.00
Union County Canning Clubs -----	75.00
Muscogee County Demonstration Fund -----	100.00
Scholarships -----	5307.00
Serum Laboratory -----	13581.12
State Fair Fund -----	334.12

Expenditures represented by refunds and canceled checks -----	783.19
---	--------

\$14,836.90

83.11

\$14,201.10

Total Receipts -----	\$166855.56
Total Disbursements -----	146620.18

Cash Balance May 27, 1918 -----	\$ 20235.38
Less Outstanding Bills -----	\$ 7256.41



ers' Institute Fund for holding		
meetings in June and July -----	875.52	
ace on Serum Fund -----	520.24	
is Funds, Scholarships and Prizes-----	2754.19	
ace on Extension Funds held to		
ffset Federal Appropriations -----	2142.83	
		\$ 13549.19
ace held to pay expenses of military and special		
aining courses conducted at request of government	\$	6686.19

### FEDERAL SMITH-LEVER ACCOUNT.

#### Receipts.

tl States of America-----	\$ 77129.25	
ds to various accounts and canceled vouchers-----	1680.50	\$ 78809.75

#### Disbursements.

es -----	\$ 38843.95	
-----	1544.61	
inery and Printing-----	2470.45	
ge, Telegraph, Freight and Express-----	2430.88	
al Light, Water and Power-----	1372.18	
es -----	2304.04	
ry -----	10.00	
l and Machinery-----	383.50	
ture and Fixtures-----	1030.84	
ific Apparatus -----	556.41	
ving Expenses-----	21561.15	
	\$ 72508.01	
editures represented by refunds and canceled vouch-		
rs -----	1680.50	74188.51
hBalance May 28, 1918-----		\$ 4621.24

### STATE SMITH-LEVER ACCOUNT.

#### Receipts.

te of Georgia-----	\$ 56000.00	
ds to various accounts and canceled vouchers-----	89.00	\$ 56089.00

#### Disbursements.

es -----	\$ 38226.87	
-----	24.50	
lations -----	5395.89	
inery and Printing-----	4.75	
ge, Telegraph, Freight and Express-----	677.01	
al Light, Water and Power-----	552.90	
es -----	210.52	
land Machinery-----	6.00	
ture and Fixtures-----	139.55	
er fic Apparatus-----	9.47	
ving Expenses -----	10275.17	
	\$ 55522.63	
editures represented by refunds and canceled vouch-		
s -----	89.00	55611.63
hBalance May 27, 1918-----		\$ 477.37

(The state appropriation covering the fiscal year July 1, 1917-July 1, 1918 for \$67129.28, of which \$56000 has been received, and the remaining \$11129.28 has been paid by the state before the end of the fiscal year on July 1st).

Under the terms and provisions of the Smith-Lever Extension Act all available from state or federal sources must be spent under definitely agreed project agreements between the Trustees of the Georgia State College of Agriculture and the United States Secretary of Agriculture. The expenditures under those agreements from July 1, 1917 to June 1, 1918 are given in this report. These figures correspond with the report to be made to the federal government, as its fiscal year runs from July 1st to July 1st and the report to be made to the federal government on July 1, 1918, will contain in addition to these figures the business transacted during the month of June, 1918.

#### Federal Project Disbursements.

Project 2—Administration .....	\$ 20
Project 4—Home Economics or Home Demonstration work.....	20
Project 5—Boys Club Work.....	1
Project 6—Movable Schools.....	4
Project 7—Farmers Field Meetings.....	1
Project 8—Educational Exhibits at Agricultural Fairs.....	2
Project 9—Live Stock.....	2
Project 10—Boys' Pig Clubs.....	1
Project 11—Girls' Club Work.....	
Project 12—Agronomy Agent Extension.....	1
Project 13—Dairy .....	1
Project 15—Marketing .....	1
Project 16—Horticulture .....	2

\$ 72

Expenditures represented by refunds or canceled vouchers..... 1

Total Federal Disbursements..... \$ 74

#### State Project Disbursements.

Project 2—Administration .....	\$ 20
Project 3—County Agents.....	41
Project 4—Home Economics or Home Demonstration work.....	28
Project 14—Publications .....	5
Project 17—Agricultural Engineering.....	16
Project 18—Forestry .....	16

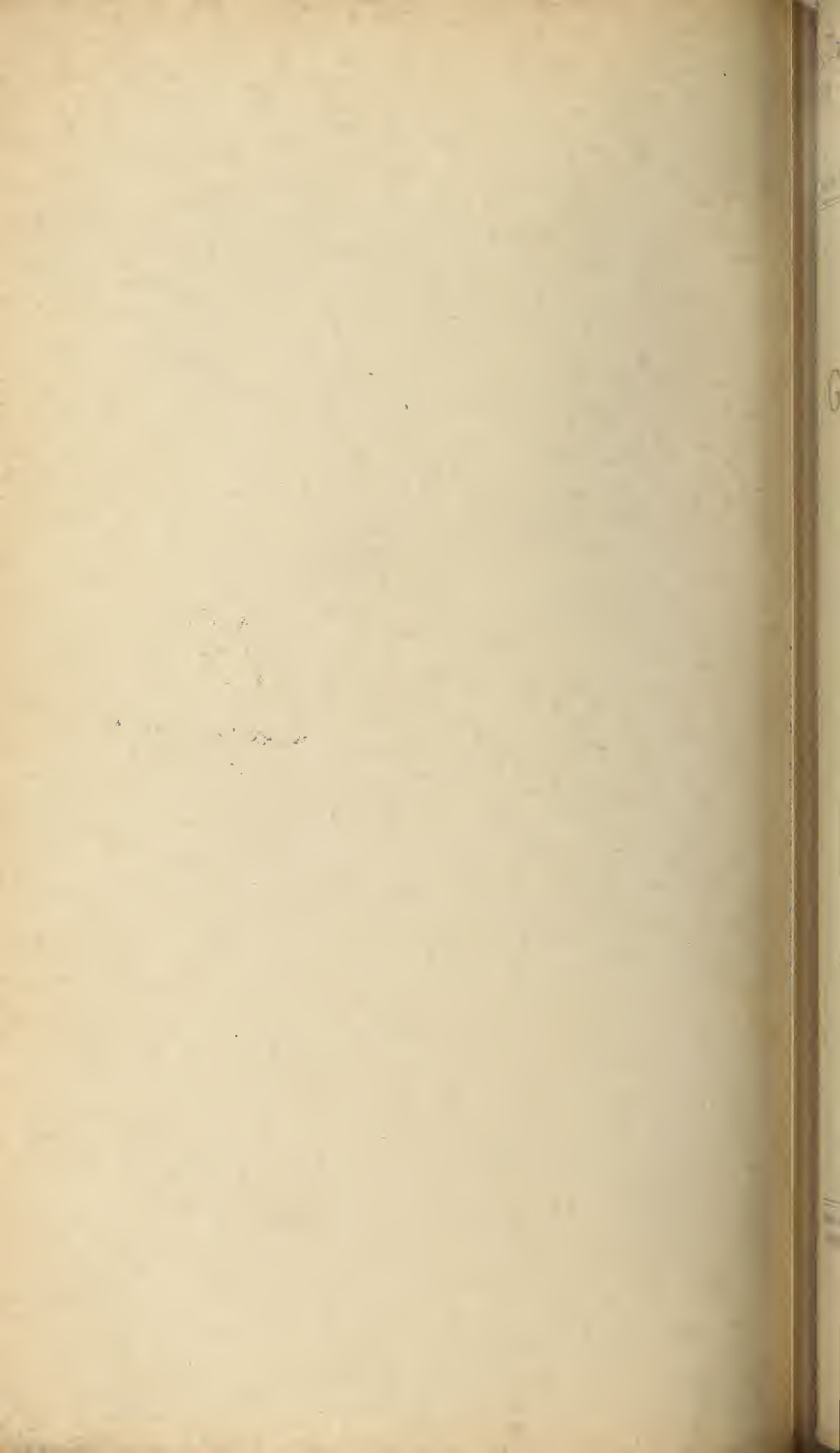
\$ 558

Expenditures represented by refunds or canceled vouchers.....

Total State Disbursements..... \$ 558

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JUNE, 1919

Bulletin 174

# Bulletin Georgia State College of Agriculture



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## Annual Report 1918-1919

Andrew M. Soule, President

Entered as second-class matter December 21, 1912, at the post office at Athens, Georgia, under the Act of August 24, 1912. Issued monthly by the College.

# Georgia State College of Agriculture

University of Georgia, Athens, Georgia

## ADMINISTRATIVE, TECHNICAL AND EXTENSION STAFF

ANDREW McNAIRN SOULE	President
JOHN RICHARD FAIN	Professor of Agronomy
MILTON PRESTON JARNAGIN	Professor of Animal Husbandry
THOMAS HUBBARD McHATTON	Professor of Horticulture
LEROY COLLIER HART	Professor of Agricultural Engineering
WILLIAM WORSHAM, Jr.	Professor of Agricultural Chemistry
THOMAS WALTER REED	Registrar
WILLIAM MILLS BURSON	Professor of Veterinary Medicine
*JAMES PHILANDER CAMPBELL	Director of Extension
JAMES BERTHOLD BERRY	Professor of Plant Pathology and Forestry
MARY E. CRESWELL	Director of Home Economics
*LEONIDAS MYERS CARTER	Junior Professor of Soil Chemistry
*DAVID D. LONG	Soil Expert in State Survey
GEORGE ARTHUR CRABB	Junior Professor of Agronomy, in Charge of Soils
†JOHN KYGROSS GILES	State Supervisor, Agricultural Clubs
†JOHN WILLIAM FIROR	Junior Professor of Horticulture
ETHEL REESE	Secretary to the President
*MARION WAYNE LOWRY	Junior Professor of Soil Chemistry
JOHN TAYLOR WHEELER	Professor of Agricultural Education
*ROBERT E. BLACKBURN	Field Agent in Horticulture
HARLOW WILLIAMSON HARVEY	Junior Professor of Horticulture
ROBERT C. WILSON	Professor of Pharmacy and Materia Medica
ERNA E. PROCTOR	Junior Professor of Foods and Cookery
ROSALIE V. RATHBONE	Junior Professor of Textiles and Clothing
*CHARLES A. PYLE	Field Veterinarian
†EARL S. BRASHIER	Hog Cholera Specialist
†*GUY RUDOLPH JONES	Field Agent in Agricultural Engineering
*LAURA BLACKSHEAR	Illustrator
†JAMES WOOD	Adjunct Professor of Poultry Husbandry
NELLE M. REESE	Librarian
HANCEL W. CALDWELL	Junior Professor of Veterinary Medicine
T. GEORGE YAXIS	Junior Professor of Animal Husbandry
†WILLIAM S. DILTS	Instructor in Poultry Husbandry
WILLIAM OLIN COLLINS	Instructor in Agricultural Chemistry
*WILLIAM E. BROACH	Field Agent in Agricultural Engineering
†CHARLES A. MARTINI	Field Agent in Animal Husbandry
*CHARLES E. KELLOGG	Assistant Field Agent, Beef Cattle
†HARRISON B. EMBERSON	Field Agent in Beef Cattle
*WALKER R. NISBET	Assistant Field Agent in Beef Cattle
†LEO H. MARLATT	Field Agent in Cheese Factories
*WILLIAM J. CLARKE	Extension Sheep Specialist
†CARL WALLACE	Extension Swine Husbandman
*ROBERT FRED WHELCHER	Supervisor of Extension Schools
*L. VINCENT DAVIS	Field Agent in Agronomy
†DeF. HUNGERFORD	Scientific Assistant in Farm Management
*FRANK WARD	Field Agent in Cotton Industry
ROBERT D. MALTBY	State Supervisor of Vocational Agriculture
†JAMES ELKANAH DOWNING	Assistant State Supervisor Pig Clubs
*ROSS RENFROE CHILDS	Scientific Assistant in Agronomy
*SILAS H. STARR	Junior Professor of Farm Management
*EDISON WESTBROOK	Field Agent in Agronomy
EARL G. WELCH	Junior Professor in Agricultural Engineering
†WILLIAM BRADFORD	Assistant State Supervisor Agricultural Clubs
*ROSS McKINNEY GRIDLEY	Field Agent in Animal Husbandry
*WILLIAM HARRY HOWELL	Extension Dairy Husbandman
*LOIS P. DOWDLE	Assistant State Supervisor Home Economics
*PAUL TABOR	Field Agent in Agronomy
†MRS. BESSIE S. WOOD	Assistant State Supervisor Home Economics
PHARES OBADIAH VANATTER	Superintendent Field Experiments
AMBROSE PENN WINSTON	Foreman of College Farm
*HENRY TOWNS MADDUX	Editor
JULIUS EUGENE SEVERIN	Junior Professor of Veterinary Medicine
WALTER CLINTON BURKHART	Junior Professor of Veterinary Medicine
LAFAYETTE MILES SHEFFER	Junior Professor of Agricultural Education
†JAMES G. OLIVER	Assistant State Supervisor County Agents
*GEORGE CUNNINGHAM	Assistant State Supervisor County Agents
*JAMES VERNON PHILLIPS	Senior Drainage Engineer
†HARRY BROWN	Scientific Assistant in Animal Husbandry
*WILLARD H. ALLEN	Field Agent, Poultry Clubs
†*GERALD SKINNER	Scientific Assistant in Dairy Husbandry
*LOUIS A. ZIMM	Extension Forester
CECIL WILDER	Instructor in Agricultural Chemistry
*RAY C. HARRIS	Field Agent in Farm Drainage
*WILLIAM ALEXANDER SMITH	Field Agent in Bee Husbandry
†SAMUEL E. McCLENDON	Field Agent in Horticulture
MAUDE SMITH	Instructor in Poultry Husbandry
†BESSIE BOGGES	Assistant State Supervisor of Home Economics
*MRS. EDITH M. ANDREWS	District Supervisor of Home Economics
CHARLES B. SWEET	Foreman of Greenhouse and Grounds

\* In Extension Service.

† In Co-operation with U. S. D. A.

‡ On leave of absence in army service.

For names of district and county agents see Extension Staff.

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## Report of the President, State College of Agriculture and the Mechanic Arts

TO THE HONORABLE BOARD OF TRUSTEES

Of the Georgia State College of Agriculture.

Gentlemen:

Agreeable to your regulations I submit for your information my twelfth annual report of the work accomplished by the Georgia State College of Agriculture and the Mechanic Arts for the collegiate year 1918-1919.

The year has been full of strange vicissitudes. Kaleidoscopic changes have followed one another in quick succession. At the outset all the energies of the institution, and its staff and student body were centered upon war emergency work. The training and preparation of soldiers to help Uncle Sam win the war engaged our attention from June to November. We were also working with the utmost vigor on all problems relating to food production and conservation.

When the armistice was signed on November 11 the plans so carefully worked out and so vigorously promoted were in large measure nullified. We were immediately faced with the necessity of reorganizing the work of the College on its normal basis, of transferring the enthusiasm and the patriotic fervor of our student body from the military over to the civilian point of view. While the production and saving of food were as essential as ever the great inspirational force behind this movement had suddenly disappeared. In a measure, therefore, we were thrown upon uncharted seas and suddenly faced by all the problems of a reconstruction period. In this crisis the student body and the staff displayed admirable self-control and thus through the aid and counsel of our friends we were able to transfer the work of the institution and its student body over from war emergency service into its regular channels after January 1, 1919, with scarcely a hitch and with remarkably little loss of time to our student body.

It is sincerely to be hoped that no such interruption of the affairs of peace as has cursed the world for the last four and a half years may again arise in the history of the present generation to disrupt the work of institutions such as this, but should the emergency arise it is needless to say that the same intensive patriotic fervor which has characterized the duties of our young American manhood will again be found ready to meet the call of the country whenever the necessity and the occasion may arise.

Last year it was a pleasant duty to record the response which Georgia made to the call of the Government for increased food pro-



duction. It is all the more gratifying, therefore, to be able to report that the crops of 1918 represented an increase in practically all particulars save corn over those of the previous year. The drouth alone prevented us from making a record in corn as well. In 1917, when we were preparing for war, our crops were worth \$548,544,000.00. In 1918, when preparing for victory, our crops were worth \$590,292,000.00. The goal for 1919, representing our peace offering, has been fixed at \$625,000,000.00. Notice that during the years 1917 and 1918, when Georgia had sent her full share of four million men to the colors, our people increased the returns from the soil to a remarkable degree. Under the handicap indicated we produced last year crops representing an increased valuation of \$363,697,000.00 over those of 1909.

The above does not include any reference to what we have accomplished in animal industries, yet the value of our livestock in the same period has increased by over \$117,000,000.00, and Georgia now ranks as the seventh state in pork production.

In spite of the war and all the losses, both economical and human, which it has caused, and in spite of the confusion which has come to our trade and industries, we appear to be living in the most prosperous age in the history of our country. Prices are exceedingly high, but wages in most of the arts and industries have kept pace with this increase. There seems to be a veritable flood of money in the country. There has been a keen demand for most of our products. Large profits seem to have been made by all classes of our citizens. We are riding on the crest of a great wave of prosperity. Just now there is grave danger that we may forget or overlook many things of a fundamental nature. We have yet to face the period of reconstruction with all of its grave dangers and pitfalls. In this hour of national triumph we must not forget that the things which have enabled us to achieve success have rested in the past on the quiet, orderly, God-fearing, law-abiding, self-respecting nature of our people. We must not forget that the triumphs we have achieved rest primarily on the education which we have extended to the mass of our people; that, but for our ability to use machinery successfully and to understand how to deal with nature so as to increase the yields of our crops and multiply the fruitfulness of our animals, we would not have been able to make an adequate response to the needs of our own nation and the world for supplies of meat and bread.

Now that the struggle is over, in the eyes of many we may lose sight of some of our ideals and some of our firmly rooted beliefs unless we take a hold upon the situation with fervor and determination. There is danger that what we may have accomplished may look too easy and appear so simple that we may lose sight of our high regard for education. It is a time for us to take a fresh grip on ourselves, to cherish and hold fast to all our national ideals, to



understand and grasp the bigness of the duty and the privilege and opportunity which is ours, to throw out a sheet anchor to the windward and hold the ship of destiny on a true course, and to know and understand that economy, self-sacrifice, fortitude, industry and integrity were never more essential to the welfare and success of our nation than at present. Above all, we must understand, appreciate and cling to the knowledge that education has brought us to our present forward position and that it is to be the beacon light set on a hill to guide us onward and upward to the rewards and achievements which lie ahead for those who know and understand the truth and will not be swerved therefrom by any combination of circumstances.

Our progress here in Georgia has, therefore, not been accidental. Our increased yields and the diversification of our crops have been brought about by much earnest and patient effort on the part of all progressive citizens aided by such service as institutions such as this could offer through its trained leaders to the people of the state. The boll weevil invasion has done less damage in Georgia than in any other state. Was this an accident? No. The results witnessed rested primarily on the fact that the College through a twelve-year period has worked through every agency at its command to teach diversification in the production of both plants and animals and to encourage the introduction and cultivation of new crops. As a result, in the section where the weevil damage has been greatest there is as much real prosperity as in any other section of the state. This has come about through the multiplying of our herds of hogs and the raising of these animals on grazing crops, thereby enabling Georgia to raise pork as cheaply as any state in the Union. In addition, we are cultivating great areas in peanuts and velvet beans. The former crop yields an oil the equal, if not the superior, of cotton seed oil and a concentrate of wonderful value as a food for both man and beast.

In a decade we have almost doubled the number of our hogs and as a result packing plants have been established and Georgia has become famous as a hog producing state. The value of our hogs has increased in the same time from \$5,429,016.00 to \$53,252,000.00, or by 960 per cent. Is this also an accident? No. It represents the rewards which have come through skillful leadership, whereby purebred animals have been introduced and scattered throughout the length and breadth of the state, whereby thousands of boys have been taught to raise hogs economically, and whereby the hitherto all-cotton farmer has been led to understand and appreciate that there are other crops than cotton which he may profitably cultivate.

Including our animal products, it is undoubtedly true that our cotton crop, even in this year of the highest prices which have been witnessed for half a century, still represents less than half of the

new wealth we produced last year. A few years since this was not true, showing the internal revolution which has taken place in our agriculture and which it is safe to say has been brought about largely through the efforts of this institution.

If hog cholera serum had not been discovered, manufactured and distributed in Georgia at cost, and if our people had not been taught how to use it so as to check the ravages of this disease, it is hardly likely that our hog industry would have attained any such proportions as it now represents. But before the efforts to teach diversification through the agency of corn, canning and pig clubs it is doubtful if "King Cotton" would have been dethroned in the second cotton growing state of the Union. Thus, we see that leadership is after all the essential factor in our welfare and advancement. It will be more important in the future than ever before because those who are acquainted with the fundamental facts understand and realize that we are still just in the shallows of the ocean of knowledge and that science is to play a more important part than ever in the future peace and prosperity of the human race.

The colleges of agriculture and mechanic arts were founded to establish and to advance instruction and research in all the branches relating to their highly specialized field. It will ever be the privilege of these institutions, if they are true to their best ideals, to lead the vanguard of the fight which science must ever wage against nature in order that the essential facts on which progress is based may be discovered and made practical and so capable of utilization with sufficient rapidity to uniformly promote the progress of mankind.

In this connection permit me to say that in one sense we have beaten Germany. From some points of view she is humbled in the dust. On the other hand, she does not feel that she is beaten. She still retains within her borders many valuable scientific secrets. She still has unimpaired her institutions of learning and many of the savants through the agency of whose creative minds she was able to bring a great part of the world under tribute. For the moment we have asserted our leadership. The great question is, shall we keep it?

Unless we are prepared to endow education as never before in our history, unless we are prepared to provide ourselves with an ever-increasing army of trained experts, we will lose that which we have spent so much blood and treasure to attain. The future of our country, therefore, hangs in the balance. In the next twenty-five years we will determine the position she is to occupy in the world, and will not be brought about by simply beating our swords into plowshares, but through the general education of the masses of our people, through the liberal maintenance of institutions of higher learning, and through the support and encouragement of research on a scale such as has never been undertaken before.

I take it that every true citizen of the United States feels that there has been given into our charge an international trust and a duty and responsibility surpassing that which has ever previously been placed in the charge of any other nation. If this be true, it is absolutely necessary that we retain the dominant leadership in arts, agriculture and industries which has recently come into our hands. In the language of the immortals who died for liberty, we must ever be ready to "carry on," to "go over the top," and to "do our bit" for education. We had 240,000 of our soldiers crushed and maimed by war and buried 70,000 of the men who wore the khaki in the hills and forest of France for idealism, liberty, democracy, and for civilization. Is it not worth while, therefore, to spend a tithe of what the war cost us for sustaining and endowing education on such a scale that through the creative genius of our race we may prevent the recurrence of such a debacle, as those of this day and generation have witnessed?

### Attendance

Last September when the College was put on a war basis and its courses temporarily changed to meet the wishes of the War Department, many thought that it would take a very long time for the institution to regain the ground which it was supposed to have lost through this arrangement. It is, therefore, very pleasing to be able to report the largest enrollment in our history. It is encouraging to know that of the 1,100 in attendance 287 were enrolled in long courses. Of the short course men 333 were trained in blacksmithing, carpentering, auto mechanics and truck driving for the United States Army. The figures recorded do not include any of the men registered in the Students Army Training Corps, several hundred of whom received a proportionate share of their training at the hands of the professors of the College of Agriculture. These men also used our grounds, buildings and laboratory equipment as freely as our regular students.

Our long courses show an increase over the previous year of 121, equivalent to an increase of 73 per cent. Fifteen of the seventy-three per cent increase in attendance was due to the admission of women. This is the most gratifying evidence of the turning movement now shown by the young men and women of our country towards the pursuit of vocational courses in agriculture, home economics and associated subjects. We think the interest as shown by the increase in our long courses is a remarkable tribute to the esteem and appreciation in which the institution is held, and as an evidence of the faith the people of this state have in the benefits which will accrue to the men and women trained through the agency of the courses it offers.

You will no doubt be pleased to observe that there have been 1,923 registrations for our long courses and 3,516 in the short



courses. During the last 12 years 5,439 individuals have received instruction on the campus here at Athens.

#### Growth in Attendance

Year	Long Courses	Short Courses	Total
1908	67	104	171
1909	62	124	186
1910	98	100	198
1911	115	110	225
1912	161	66	227
1913	185	165	350
1914	182	284	466
1915	191	350	541
1916	200	219	419
1917	209	543	752
1918	166	638	804
1919	287	813	1100
<hr/>			
Total	1,923	3,516	5,439

The figures cited above demonstrate that the prediction made last year that we would have a normal attendance in 1918-1919 has been abundantly fulfilled.

The Government is taking an increasing interest in the welfare of institutions such as this. You are acquainted with the provision which has been made for the establishment of a unit of R. O. T. C., and the advantages it offers to young men to secure equipment and funds therefrom under certain conditions which will enable them to defray a part of their college expenses. Those who complete their courses satisfactorily also have an opportunity to obtain a commission as Second Lieutenant in the Regular Army.

The object of the Government in requiring the study of military tactics is naturally to prepare young men capable of serving the military arm of the nation acceptably in case of war. The training is of such a character as to be highly beneficial to the students and does not in any way interfere with their studies. Under the arrangement now in effect a young man may obtain benefits equivalent to \$621.33 for sustenance, clothing and travel during the period of his college course. Upon graduation the competent man may enter the United States Army as a Second Lieutenant for a period of six months with pay at \$100.00 a month and expenses.

In addition to the above the Government has sent agents to the College recently asking that we install a Motor Corps unit. Arrangements to this end have already been completed. Our equipment and facilities were such that we were favorably recommended by the inspecting officers for the establishment of a cavalry unit.

As you doubtless know, we have a group of rehabilitation students enrolled at present and this number will be greatly increased



during the year. These men are sent to us by the Federal Board for Vocational Education and we are permitting them to enter any course which they are qualified to take up. In this way we shall no doubt be able to serve the interest of many disabled men advantageously by preparing them to take up some specialized line of work associated with agriculture. In addition we have been requested to put on a special intensive short course of six to eight weeks during the summer for the rapid training of men who may wish to specialize in agriculture and go back to their farms this fall. Arrangements to the ends indicated are being made as rapidly as possible.

The military arm of the Government is also naturally interested in the training of veterinarians and the work of this course is being extended as rapidly as our facilities will permit.

It is probable that we will be requested to take on other lines of training which will adapt our men to serve the Government acceptably in time of war. As several of these courses can be added without any special cost to the state except housing facilities, and will provide such advantages to our young men without lengthening their course of instruction, it seems highly desirable that we should undertake to coöperate with the Government in these enterprises to the limit of our ability. Undoubtedly, if this be done, further endowment from national sources for the support and maintenance of the work of such institutions as this may be anticipated in the not distant future.

It is needless to point out that there is still a good deal of interest in our short courses and that the great majority of those in attendance upon the same return to the farm. Of the total number of students enrolled since the College started by far the greater part of 3,500 are at work on Georgia farms unless they went into the military service. It is quite certain that a majority of these men will return to the land as soon as possible. These men are exerting a very wholesome influence on our agriculture.

Our educational extension work has been more definitely organized on a project basis during the year than has previously been possible. As a result we find that the boys and girls whom we have enlisted in our club work are being more and more benefited by the advice, information and encouragement which we are able to extend to them through our men and women county agents. You will be interested to know that many superintendents are requiring that all boys and girls in their schools take up club work. This has made a heavy demand on us for a type of assistance which we are glad to render. It shows that the initial work undertaken to place agriculture on a better vocational basis is being appreciated and is bearing fruit.

The usual short course for boys and girls will be held at the College, beginning August 6th, and the usual Fair School will be held

in Atlanta. In addition to all the types of instruction which we are offering here at Athens and through the agency of the boys' and girls' clubs, we are not unmindful of the needs of the adult population, and so through the agency of our Extension Division there were held last year 15,092 meetings attended by 483,609 people. We are also keeping up our demonstration work on an extensive scale, more than 100,000 individuals being associated with this movement last year. The women agents have done their full share in promoting the welfare of the home.

### Courses for Women

Courses for women were instituted last September in accordance with your instructions. This made the institution co-educational. Some 24 young women registered in the Junior class and most of them will return next year. There is every reason to anticipate a larger Junior class next year. We shall probably have 50 to 60 women pursuing courses leading to a degree. The presence of women in the College this year has been wholesome and beneficial from every point of view, and now that arrangements have been made to provide for them a dormitory there is every reason to believe that the present happy relations will continue in the furtherance of social welfare plans that will be beneficial to our student body as a whole.

It was not thought wise at present to provide for the admission of women to the Freshman and Sophomore classes. In the first place a number of institutions in the state are able to prepare women for the Junior class. In the second place we have not the facilities, instructors or funds with which to sustain a four year course as yet. The efforts of the Trustees to provide adequate training for women so that they may enjoy the same facilities as men and be equally well prepared to carry on their share of the duties and responsibilities which our modern civilization imposes on women is greatly appreciated. I cannot but feel that your action with reference to this matter will exercise a strictly wholesome and beneficial effect on the institution as a whole. For the information of those who question the advisability of taking up work of this character, permit me to say that the Government expects us to train women satisfactorily to act as county agents in home economics under the terms and provisions of the Smith-Lever Act, and for the conduct of vocational work as provided for under the terms of the Smith-Hughes Act. We are making satisfactory progress along both these lines.

There was no other institution in the state in position to do this work. In spite of statements which have been made to the contrary very few of the young women coming to us are able to offer more than 28 to 32 hours of credit towards a degree. Women have registered here from a number of the different institutions in Geor-

gia, and that they have not been discriminated against in the matter of credits is demonstrated to all unbiased minds by the fact that they cannot enter a standard woman's college outside of the state and secure more credits than we have gladly and cheerfully granted them. The women coming to us realize their need of taking advanced work and are grateful for the privilege which has been afforded them within Georgia to secure the training which is essential for them to become the dominating factors in the leadership of the communities which they may undertake to serve.

This statement is made without bias or prejudice towards any and is simply a record of the facts as we have found them. It constitutes the only justification the Trustees ever needed with reference to the steps they took to make the College co-educational. It is manifestly absurd and unjust to require the women of Georgia to go outside of the state and spend several years at a heavy financial outlay to themselves to obtain the instruction which we are in position to provide for them at a reasonable cost and in association with the conditions and environment peculiar to Georgia.

### Student Interests

The best care, attention and consideration possible has been given to the welfare of the students during the year. They have coöperated splendidly with the executive office along all lines of previous endeavor. We were recently visited by Colonel Whiting, an army inspector, who made the following statement: "I was aware of the character of your institution before I got inside your buildings. The neatness and attractive appearance of your grounds tells its own story. I congratulate you on the cleanliness of your buildings and the splendid condition in which I found your furniture and equipment. I have visited all the institutions in the South and I have found none equal to yours in these respects." This statement tells its own story and is a tribute to the faithfulness of all who are associated with the College. It particularly reflects credit on our student body. But for their coöperation we would not be able to keep the buildings and grounds in the condition which elicited the commendation of Colonel Whiting.

Our students are active in all University work, being liberally represented on the athletic teams. The president of the senior class and of the College Y. M. C. A. both happen to be agricultural students. I have heard it said that our students lack in religious fervor and sympathy. This does not seem to be borne out by the facts. For instance, Secretary J. W. Jenkins of the Y. M. C. A., reported for March, 1919, that the daily attendance at the vesper services was 61. The total attendance at five special meetings was 1,800. The average attendance per Sunday at 14 boys classes was 56. The average attendance of the Promotion Committee, held once a week, was 60.

Good work has been done by the various classes; excellent, I



think, when we consider that our students were transferred from a civilian to a military basis, and then back to a civilian basis within four months. We have naturally suffered somewhat from the tumult of the times, but nothing like as much as had been anticipated, and I think I can safely say in behalf of the student body that they have shown a proportionately better self-control than many older and supposedly more staid individuals with whom I have come in contact.

The Agricultural Club has continued to function throughout the year and has made a very good record since January first. The Agricultural Quarterly has published two issues this spring which I think are up to the standard of previous years. The incoming staff will devote its best energies to placing the paper on a better literary and financial basis than ever. You will be interested to know that a section of the Quarterly has been assigned to our women students and they are carrying on their part of the editorial and news-gathering work very satisfactorily.

Provision has been made for adequate representation of the College and its various courses in the Pandora. The Alpha Zeta, our honorary fraternity, has had a very good year, all things considered.

#### **Alumni**

The College now has approximately 133 graduates. Of the 121 men who received the Bachelor of Science degree previous to this year two are dead. Of the remaining 119, 52 were enlisted in some branch of military service. We had representatives in the air service, in the artillery, engineers, Y. M. C. A. work, intelligence office, quartermasters' office, in the Navy, in the chemical warfare section, in the forestry division, and in the infantry.

Two of our men were killed in action. They are P. C. Jones of Midville, Ga., Second Lieutenant Infantry, A. E. F., of the class of 1915; and E. M. Braxton, Second Lieutenant of Infantry, A. E. F., of the class of 1917. It is with keen regret that I record the loss of these two splendid young men who put service and sacrifice and devotion to their country above life itself. The gold stars on our service flag, while watered with our tears, also represent to us emblems of victory. It is a glorious satisfaction to know that our men when tried were not found wanting. It was a privilege to be associated with them even for a little while, and the inspiration of their lives and their service is bound to be now and in the future one of the greatest treasures and assets of this institution. Let us hope that their memories may ever be kept green and that those of us who are left behind may realize that in devotion to high ideals lies the greatest reward; and may we, when trials and difficulties surround us, overcome them as bravely and heroically and successfully as they met the greatest issue in life, which is death itself.

In justice to our graduates and the work which they performed it seems only proper that a record of their service should be pre-



sented for your consideration. Below you will, therefore, find the names of the men, the year of their graduation, the rank they held and the nature of the work in which they were engaged.

#### Graduates of College of Agriculture in Service

Alexander, E. D., 1917—Sgt. Q. M. C., A. E. F.  
Ball, F. W., 1910—2nd Lieutenant, Air Service.  
Barlow, W. W., 1916—Infantry, A. E. F.  
Bassett, N. P., 1916—U. S. Navy.  
Bedinger, R. D., 1917—1st Lieutenant, Air Service, A. E. F., Pilot.  
Bexley, J. M., 1918—Navy, Second Class Seaman.  
Braxton, E. M., 1917—2nd Lieutenant, Infantry. Killed in action.  
Brown, H. L., 1916—Chief Petty Officer, Navy.  
Burns, W. A., 1915—Sgt., Intelligence Office.  
Burrage, C. H., 1915—Engineers, A. E. F.  
Chandler, F. C. T., 1915—2nd Lieutenant Infantry, A. E. F.  
Childs, R. R., 1912—2nd Lieut., Air Service, Aerial Photography.  
Coffee, J. T., 1917—1st Lieutenant Infantry, A. E. F.  
Collins, W. O., 1916—Chemical Warfare Service.  
David, F. C., 1917—2nd Lieutenant Infantry, A. E. F.  
Davis, C. B., 1915—2nd Lieutenant Infantry, A. E. F.  
Dillard, E. C., 1914—Army Y. M. C. A.  
Drexel, E. P., 1917—Training Camp.  
Garner, C. G., 1917—Student Training Camp.  
Hasty, W. D., 1916—Sgt., Q. M. C., A. E. F.  
Hill, P. R., 1916—2nd Class Seaman, U. S. N. R. F.  
Hillis, W. D., 1917—2nd Lieutenant, A. E. F.  
Jones, Guy R., 1915—2nd Lieutenant, Infantry.  
Jones, P. C., 1915—2nd Lieut. Infantry, A. E. F. Killed in action.  
Jones, W. C., 1917—Chemical Warfare Service.  
Keyser, C. N., M.S., 1917—Ensign, Naval Aviation, A. E. F.  
Kemp, C. G., 1917—A. E. F.  
Kemp, H. N., 1917—A. E. F.  
Kollock, J. T., 1912—Captain Engineers, A.E.F.  
Little, Bird, 1915—2nd Lieutenant, Infantry.  
Maddux, Henry T., 1916—Infantry. Limited Service.  
McConnell, Bright, 1915—Air Service, Cadet Pilot.  
Nicholson, J. W., 1916—Captain Infantry.  
Pedrick, S. H., 1915—Sgt., Q. M. C.  
Purcell, Jones, 1916—Sgt., Q. M. C.  
Saye, G. P., 1917—Sgt., Q. M. C.  
Skinner, L. I., 1918—2nd Lieutenant, Field Artillery.  
Stanley, W. K., 1915—Sgt., Q. M. C.  
Starr, S. H., 1910—2nd Lieutenant, Field Artillery, A. E. F.  
Still, D. D., 1917—Infantry. Limited Service.  
Tabor, Paul, 1914—2nd Lieutenant Air Service, Pilot.  
Ward, F. C., 1915—2nd Lieutenant, Infantry.  
Watson, O. D., 1917—Private Infantry.

Westbrook, E. C., 1914—1st Lieutenant, Field Artillery.  
 Whelchel, R. F., 1912—2nd Lieutenant, Air Service, Pilot.  
 Wilder, C. N., 1916—Student Officer, R. O. T. C.  
 Wilson, W. R., 1915—1st Lieutenant Infantry, A. E. F.  
 Wingate, H. L., 1917—Major, Air Service, A. E. F., Pilot.  
 Winn, C. S., Jr., 1915—Forest Detachment, Engineers, A. E. F.  
 Woodall, J. F., 1915—2nd Lieutenant, Field Artillery.  
 Worrall, Lloyd, 1913—English Army.  
 Wright, Homer, 1915—Field Artillery, A. E. F.

We are proud of the record of these fearless young men who placed their all upon the altar of their country. It has been an inspiration to have been in touch with them and to have had even a small part in forming the purpose of their lives and in aiding them to discharge so acceptably the duties which the most bitter war in history privileged them to perform. It is not possible at this time to secure a list of all the men associated with the College in different capacities who have served. Another year I hope it may be possible to present a correct list of every man whose name is represented on our flag, with a record of the services he performed.

You may be interested to know that 42 per cent of our graduates were in active service. Twenty-one are still in the army. Twenty-four per cent of our graduates are county agents. Twenty-seven per cent are teachers, and fifteen per cent are farm owners. Ninety-two and six-tenths per cent of our graduates are engaged in some form of agricultural work, and nearly all of them are located in Georgia. You will thus see that within a period of ten years a considerable proportion of the men who graduated from this institution have gone out and acquired farms for themselves which they are operating successfully. One of our graduates directed a farm last year on which a return of \$40,000.00 was secured. Several others have made from \$2,000.00 to \$5,000.00 on their farming operations. It has been said that not a large enough percentage of our graduates go into farming. This has not been their fault. Most of them have had to work several years to acquire some capital with which to purchase land. The drift of our work is directly to the farm and our problem is to secure enough men to handle and supervise satisfactorily the teaching, research and extension work of the College.

#### District Agricultural Schools

The tenth annual meeting of the principals of the district agricultural schools was held in my office at 10:30 o'clock on Friday, April 25th. Ten of the principals were present. A general discussion of the work of the schools was entered into. Committees were appointed to revise the course of study in certain respects. It was suggested that a coöperative arrangement be made by which the schools might make exhibits in association with those of the College at the principal fairs of the state. Certain modifications were also

made in the home economics course as prepared by the Division of Home Economics for the Georgia State Vocational Board, thereby adapting it to the needs of the district agricultural and mechanical schools of the state.

The principals expressed their appreciation of the Governor's efforts in behalf of the schools touching the matter of securing the prompt payment of funds due these institutions. The appreciation of Treasurer T. W. Reed's services was also entered on the record.

Arrangements were made through the agency of the Vocational Board for a meeting of the district agricultural schools on November 28 and 29 at Monroe, Ga., for the purpose of discussing and further coördinating the work of the State and Federal Vocational Board with that of the schools. Dr. Joseph S. Stewart was requested to prepare the annual report as usual. The principals were unanimous in their desire that the literary, vocational and athletic contests held annually at the College for several years past be continued.

Provision was also made for a meeting of the home economics teachers of the district agricultural schools at the College of Agriculture on May 10th, the conference held the previous year having been productive of much good.

The general work and character of the schools continues to improve. The course of study is now formulated on a basis calculated to train the boys and girls satisfactorily for their life work. It is coördinated sufficiently well with the course of instruction at the Georgia State College of Agriculture to permit them to enter this institution and graduate therefrom on the same basis as students from high schools.

The fourth annual literary, vocational and athletic contest of the district schools was held in Athens on April 25 and 26. Eighty boys and forty-four girls participated. Great enthusiasm was aroused over these contests. The program has been considerably modified and amplified for another year, more vocational contests being added. The grand prize was won again by the Ninth District School at Clarkesville. The literary banner also went to the same institution. The industrial banner was won by the Fifth District School at Monroe, and the athletic banner by the Ninth District School at Clarkesville. Medals of the type used last year were awarded to the winners in the various events. These medals were provided out of funds furnished through the courtesy of the Virginia-Carolina Chemical Company. The contests were greatly enjoyed by all, and it seems to be the united opinion that this was the best meet yet held. A delightful luncheon was served to the guests and visitors by the ladies of the Home Economics Division of the College. The funds to defray the cost of this luncheon were provided by a patriotic group of citizens of Athens, of whom Hon. M. G. Michael was chairman.



### Meetings at the College

The meetings of the various organizations, usually held in the winter, as you doubtless recall, were transferred to the summer at the request of their representatives. It was thought that many advantages would accrue from his arrangement. Accordingly, the annual meeting of the Georgia Dairy and Livestock Association was held on August 6, 7 and 8. A good many people attended the meetings during this period. One of the features of the meeting was a hog sale, which proved a most interesting and valuable feature of the occasion. Addresses were delivered by E. Z. Russell of the Bureau of Animal Industry in Washington, and Prof. R. J. H. DeLoach, Director of the Farmers Bureau of Agricultural Research and Economics of Armour & Company. The officers of the Dairy and Livestock Association are: President, Hon. A. S. Chamblee; Vice-President, Charles J. Hardeman, Commerce, Ga.; Secretary, M. P. Jarnagin, of the Georgia State College of Agriculture.

One of the difficulties in connection with the holding of meetings of this character at Athens has been the lack of adequate facilities in which to judge, handle and display livestock and hold sales of various kinds. The initial appropriation which the Legislature made towards the erection of an Animal Husbandry building has been received and used under your direction to erect a structure which can be used temporarily to advantage for such purposes. It is contemplated this year, therefore, to hold another farmers' conference beginning on August 4. On two days, the 6th and 7th, special programs will be put on and prominent speakers brought from this and other states to present messages of fundamental value to our people. Live stock sales of various kinds will be held. In this way a meeting of this character can be given great educational value and made the means of serving a number of very useful purposes, particularly in encouraging the distribution of high grade animals.

Our livestock friends are insisting that the College take the lead along the line indicated, and, as I understand it, this arrangement meets with your approval. They are also insisting that the building be finished so that greater specialization in animal industries may be permitted and a larger number of young men trained, through special courses and long courses, to serve the state in this particular field. A building of this kind will stand as a worthy monument to an industry which is now represented by an investment of \$200,000,000.00. Our livestock interests have increased in value by nearly \$117,000,000.00 since 1910. The Legislature, having made an initial appropriation to start our animal husbandry building, will no doubt be glad this summer to appropriate the \$50,000.00 needed to complete it. It will then represent the finest building of its kind in the South and one of the few buildings devoted to the advancement of that type of industry most essential to the proper



diversification of our agriculture. A committee was appointed to aid the Trustees in securing the appropriation needed for the erection and completion of this building in 1917. This committee still continues in office and is earnestly concerned about securing funds for the completion of the building. For your information I record names of these gentlemen: I. C. Wade, Cornelia; B. W. Hunt, Eatonton; T. J. Simpson, Rome; S. C. Andrews, Cuthbert; W. R. Bowen, Fitzgerald; W. J. Mullis, Waycross; E. T. Comer, Milhaven; M. B. Lane, Savannah; Judge James Hick, Dublin; R. C. Neely, Waynesboro; J. C. McAuliffe, Augusta; C. H. Bonner, Milledgeville; E. A. Barnett, Washington; J. J. Conner, Cartersville; W. T. Anderson, Macon; H. H. Tift, Jr., Tifton; J. B. Wight, Cairo; C. L. Bennett, Jefferson; J. R. Brown, Ashburn; Captain W. B. Rice, Dublin; J. H. Hooks, Warthen; W. I. Harley, Sparta; M. P. Jarnagin, Athens; Evans Lunsford, Covington; Gunby Jordan, Columbus; J. Pope Brown, Hawkinsville; Ed Cornwell, Lavonia; Jack Craft, Hartwell; P. S. Cumming, Lela; C. F. Shingler, Ashburn; E. J. Willingham, Macon; Henry Watkins, Atlanta; R. E. Ellington, Fayetteville; J. T. Anderson, Marietta; W. H. Peacock, Cochran; J. D. Weaver, Dawson; H. A. Petty, Dawson; R. F. Shedden, Atlanta; and L. W. Jarman, Porterdale.

The Georgia Breeders' Association held its annual meeting at Athens on August 6, 7, and 8. The following officers were elected: H. A. Petty, President; John R. Fain, Vice-President; L. E. Rast, Secretary.

The interest in the production of better seed continues. Cotton was inspected for 23 members, corn for 9 members, wheat for 5, oats for 1, rye for 2, peanuts for 2, and velvet beans for 3. The inspection of cotton seed represents the largest amount, both in acres and in value. It is estimated that between 15,000 and 20,000 bushels of cotton seed were inspected.

Interest also continues in the fair exhibits of registered seed. All the classes offered were competed for last year. In the fall of 1919 ribbons are being offered for pedigreed seed. It is hoped in the next few years it will be possible to exhibit only pedigreed seed.

### Extension Teaching

Extension Schools were held in the winter of 1918, but on account of the rain and bad roads it was decided to change these meetings to the summer months. Seven schools held in July and August at Tifton, Douglas, Americus, Carrollton, Granite Hill, Madison and Powder Springs, and the wisdom of this change was proven by the better attendance and effectiveness of the schools.

Systematic formal instruction was carried on at each one of these schools for a week, the lecture work being almost identical in type to that given at the winter short course at the Georgia State College of Agriculture. The limited facilities of the district agricultural schools were supplemented by large amounts of labora-

tory equipment sent from various departments of the College. The great interest shown in these schools indicate that this particular work is of a permanent character and capable of developing into an institution of unusual value to the public.

These Extension Schools tend to focus the interest of the people of a particular congressional district upon their own district and mechanical school in a manner that will promote agricultural instruction in every district of the State. The College is limited in its ability to extend very materially this work because of the small amount of money at its command. Every effort will be made, however, to develop this work, as it is an essential form of constructive extension teaching and one that has gained the appreciation of the intelligent farmer who is seeking for specific knowledge in scientific agriculture.

### Meetings Organized in 1918

	Number	Estimated Attendance
Extension Schools -----	7	6,000
Farmers' Institutes -----	395	53,938
Dairy Extension -----	143	7,405
Livestock Meetings -----	298	18,949
Poultry Club Meetings -----	84	1,860
Marketing Meetings -----	50	2,500
Agronomy -----	136	27,050
Livestock Disease -----	122	6,189
Agricultural Engineering -----	126	3,200
Horticultural Meetings -----	81	7,553
Plant Pathology and Forestry -----	150	3,055
Pig Club Meetings -----	44	1,430
Teachers' Institute attended -----	210	14,700
Corn Club Demonstrations -----	54	8,644
Meetings of Canning Club Girls -----	5,953	145,104
Meetings of Home Demonstration Club Members -----	7,225	73,925
Educational Exhibits -----	2	100,000
Boys' and Girls' Short Courses -----	12	2,107
Total -----	15,092	483,609

You will notice in the above report that 15,092 well organized meetings were held during the year and that they were attended by approximately 483,609 people. Our representatives traveled 326,077 miles in attendance upon these meetings, and the mileage in a measure represents the response that our men made to the request of the Georgia farmer for information in those phases of farming with which he was unfamiliar. The facts which have been discovered by the experiment stations all over our country, and the information which has been hid away in the bureaus and libraries is thus brought to the attention of the farmer in a way that it may be easily understood. This type of education is giving wonderful re-

sults in waking up the people and, in keeping with the thought of the times, it is the epitome of democracy in education.

### Special Meetings

During the Scrub Sire Campaign special extension meetings were held at Adairsville, Cunningham, Snow Springs, Mineral Springs, Folsom, Pleasant Valley, Pottett, Stover, Halls, Barnesley, Ransom, Kingston, Pisgah, Taylorsville, Big Pond, Cross Roads, Oak Grove, Ligon, Gillam Springs, Enharlec, Davis, Stilesboro, Adams Chapel, Pine Log, Pleasant, State, White, Stump Creek, Macedonia, Corbin, Rock Creek, Dewey, Five Forks, Casville, Center, Rowland Springs, Smithville, Iron Hill, Rock Hill, Altoona, Emerson, Pine Forest and Rebecca in Bartow County.

In Newton County meetings were held at the Court House; at Covington followed by a personal canvass of the farms and meetings at Birchstone, Newborn and Mansfield; in Oconee County at the Court House at Watkinsville, at Eastville, and Center Schools, Bogart and County Schools; in Coweta at Newman, Raymond, Madras School, Sargent, Grantville and Senoia; in Lowndes County at Dublin, Stephens School, New Bethel, Bethsade, Lovette, Pine Grove School, Spivy, Pine Forest, Lebanon, Long Creek, Buckhorn, Dexter; in Polk County, Cedartown; in Camden County, St. Mary's; in Lowndes County, Valdosta.

In Habersham County at Clarksville, Demorest and the Ninth District A. & M. School; in Walton County at Monroe; in Grady County at Cairo and Wood Lawn School; in Tift County at Tifton, Leesburg and Smithville; in Thomas County at Thomasville and Metcalf; in Colquitt County at Moultrie, New Elm, Bakers, Norman Park; in Sumter County at Americus; in Walton County, Monroe; in Burke County, Waynesboro; in Butts County at Jackson; in Toombs County at Lyons and Vidalia; in Dougherty County at Albany; in Greene County at Greensboro and Crawfords School; in Rabun County at Clayton and Dillard; in Floyd County at Rome, Cave Springs and Model School; in Walker County at Kingston; in Jenkins County at Millen, Ogeechee School, Lewis School, Gordan School, Dry Branche Church and Davisboro; in Spalding County at Griffin, Sunny Brook School, McIntosh School, Rehobeth School, Orchard Hill School, Ruberta School, Sunny Side School; and in Carroll County at Carrollton, County Line School, Farmers High School, Burwell School, Mt. Zion School and Burwell's Store. A total of 142 meetings were held in 24 Counties, attended by 8,520 farmers, or an average of 60 people at each meeting.

This shows the well organized effort to reach the rural districts. In many cases where the farmers were too busy to attend meetings the specialists made a house to house canvass, directed by the county agent. In this manner they met the individual farmer and discussed his problems on the ground, then they gathered at the school house at night, giving illustrated lectures and answering



questions. This has been the direct result of placing many pure bred sires in communities where they were not used before, and the scrub sent to the block.

Other meetings held were the 80 high schools visited in the interest of agricultural education. The importance of this work cannot be over estimated since we are far short of supplying the demand for professional agricultural workers with the proper training, and the farm offers the greatest opportunity today of any profession.

### Summer Courses

The usual provision has been made through the agency of the Summer School for instruction in agriculture and home economics and related subjects. The instruction is of two classes: first, that of interest to those teaching in secondary schools or those who wish to secure two or more units; thereby enabling them to enter the College of Agriculture next fall without conditions; second, to those who wish to pursue courses leading to college credit.

Our laboratory facilities are better than ever for the promotion of work of this character. This is particularly true of the laboratories in the departments of Agricultural Education and Home Economics, which have been greatly expanded and better equipped during the year.

The demand for vocational teachers to work under the provisions of the Smith-Hughes Act is very great. It is now difficult to find men and women properly trained to carry forward work of this character. A considerable number of state supervisors of agriculture are needed and there is a strong demand for men prepared to take charge of the teacher training departments of agricultural colleges and universities. A large number of men are also required to carry forward instruction in vocational agriculture in our secondary schools. The same deficiency exists with reference to women as well. On this account very liberal provision has been made through the agency of the Summer School this year for all those who may wish to secure instruction in vocational agriculture or home economics.

The usual summer courses in cotton grading are being continued. There seems to be a renewed interest in this matter now that the excitement incident to the war has subsided and things are returning to a normal basis.

Our graduate work was practically discontinued during the war because of the fact that all men eligible to enter courses of this character either volunteered or were drafted into the military service. Arrangements have been perfected for the re-establishment of our graduate courses, and it seems clear that a number of men and possibly some women will register for work of this character in the fall. We are making a special effort to urge the importance of graduate work on our own students and others with



whom we come in contact, because the specialized training secured in this way better prepares those who take these courses for the work in which they expect to engage later on. Special arrangements have been made by which all teachers employed coöperatively under the Smith-Hughes Vocational Act may return to the College this summer and continue their studies so as to better qualify themselves for the duties of the positions they now hold.

### **Boys' and Girls' Short Course**

The Boys' and Girls' Short Course was held in August of last year. The value of the scholarships has not been increased during the period of the war. The cost of railroad travel and board, however, has gone up materially. On this account we were forced to shorten the length of the course and confine it to a period of one week. This school was in session from August 8 to August 16 and 146 boys representing 90 counties and 118 girls representing 85 counties were present. This was one of the best group of boys and girls which ever came to the College. They did good work and showed a serious mindedness and an interest which was quite refreshing. They were evidently impressed by the seriousness of the situation by which we were confronted at that time and were doing their best to acquire information which would enable them to aid more effectively in the production of food supplies during what was then supposed to be the most critical year of the war.

It was a great privilege and inspiration to have these boys and girls with us. They are the leaders of the communities from which they come. They came to us through the agency of scholarships awarded for excellence in some line of agricultural or home economics service work by the Southeastern Fair Association; the Atlanta, Birmingham and Atlantic Railway; the Georgia State Fair Association; the Georgia, Southern and Florida Railroad; the Georgia-Florida Fair Association; the Woodruff Fair Association; the Wrightsville and Tennille Railroad; Swift and Company; and through the kindness of public-spirited county superintendents of public construction, county boards of education, county commissioners of roads and revenues, women's clubs, bankers and bankers associations, and business men generally.

### **Change in Staff**

It is with deep regret that I record the death of Mr. G. C. Schempp, Jr., adjunct professor of farm management, a victim of the influenza epidemic which swept the country this winter. Mr. Schempp was an energetic and conscientious worker and his services have been greatly missed by the division with which he was associated. A quiet and reserved gentleman, a true and honest friend, Mr. Schempp won all with his admirable courageousness and high ideals of living.

From the staff through resignation have gone nine young men to accept more lucrative positions than we were able to offer. Un-

less funds are provided by the state to prevent the recurrence of this loss the institution will be seriously crippled for it is impossible to replace men whom we have trained and who have the advantage of several years of experience in the work.

#### Resignations

G. W. Firor, Supervisor of Extension Schools.  
C. L. Veatch, Field Agent in Agronomy.  
O. T. Goodwin, Junior Professor of Animal Husbandry.  
M. W. H. Collins, Field Agent in Agronomy.  
G. L. Bigford, Scientific Assistant in Animal Husbandry.  
J. A. McClintock, Extension Pathologist.  
L. E. Rast, Junior Professor of Agronomy.  
E. W. Hadley, Extension Forester.  
Elmo Ragsdale, Field Agent in Horticulture.

#### Deceased

G. C. Schempp, Jr., Adjunct Professor of Farm Management.  
**Members of the staff returned to their positions from military service**  
T. H. McHatton, Captain, Aircraft Production.  
H. T. Maddux, Limited Service, in Office of Adjutant General of Georgia.  
Frank Ward, Second Lieutenant, Infantry.  
R. R. Childs, Second Lieutenant, Air Service, Aerial Photography.  
W. O. Collins, Chemical Warfare Service.  
C. N. Wilder, Central Officers' Training Camp .  
Paul Tabor, Second Lieutenant, Air Service.  
E. C. Westbrook, First Lieutenant, Field Artillery.  
S. H. Starr, Second Lieutenant, Field Artillery.  
H. L. Brown, Chief Petty Officer, U. S. N. R. F.  
R. M. Gridley, Chief Petty Officer, U. S. N. R. F.  
W. H. Howell, Second Lieutenant, Food and Nutrition Division of Sanitary Corps.  
C. E. Kellogg, Second Lieutenant, Quartermasters Corps as an Instructor in school for officers.  
W. C. Burkhardt, Second Lieutenant, Veterinary Corps.  
E. S. Brashier, Second Lieutenant, Veterinary Corps.

#### Appointments

T. George Yaxis, B.S.; M.S.A., Cornell University, Junior Professor of Animal Husbandry.  
Hancel W. Caldwell, D.V.M., Alabama Polytechnic Institute, Junior Professor of Veterinary Medicine.  
L. Vincent Davis, B.S.A., University of Missouri, Field Agent in Agronomy.  
Harrison B. Emerson, B.S.A., Alabama Polytechnic Institute, Field Agent Beef Cattle.  
DeF. Hungerford, B.S., M.S., University of Minnesota, Scientific Assistant, Farm Management.

Ray C. Harris, B.S.A., University of Georgia, Field Agent Farm Drainage.  
 Harlow W. Harvey, B.S.A., University of Georgia, Junior Professor of Horticulture.  
 Rosalie V. Rathbone, B.S., Columbia University, Junior Professor of Textiles and Clothing.  
 Erna E. Proctor, Junior Professor of Foods and Cookery.  
 Bessie Boggess, Assistant State Supervisor Home Economics.  
 Maude Smith, Instructor in Poultry Husbandry.  
 Robt. Fred Whelchel, B.S.A., University of Georgia, Supervisor Extension School.  
 William E. Broach, B.S.A., University of Georgia, Field Agent Agricultural Engineering.  
 William J. Clark, Extension Sheep Specialist.  
 Carl Wallace, Extension Swine Husbandman.  
 William A. Smith, Field Agent in Bee Husbandry.  
 Samuel E. McClendon, Field Agent in Horticulture.  
 H. H. Kemp, Sweet Potato Specialist.  
 Louis A. Zimm, B.S., M.F., Cornell University, Extension Forester.  
 Eva L. McGee, Field Agent in Dairying.  
 Henry C. Lyon, Inspector in Agronomy.  
 L. C. Arnett, Photographer.  
 Alfred M. Thornton, B.S.A., University of Georgia, Assistant Editor.

The Extension Division now has three hundred and four men and women on its staff, 66 supervisors, specialists and district agents, 150 county agents and 88 home demonstration agents. For your information the names and addresses of the extension staff members are given:

#### Extension Staff

Campbell, J. Phil	- - -	Director of Extension	-----	Athens
Creswell, Mary	- - -	Director of Home Economics	-----	Athens
Giles, J. K.	- - -	Assistant Director of Extension	-----	Athens
Oliver, J. G.	- - -	Assistant State Agent	-----	Athens
Cunningham, G. V.	- - -	Assistant State Agent	-----	Ellaville
Dowdle, Lois P.	- - -	Assistant State Agent	-----	Athens
Boggess, Bessie	- - -	Assistant State Agent	-----	Athens
Wood, Mrs. Bessie S.	- - -	Assistant State Agent	-----	Athens
Downing, J. E.	- - -	State Pig Club Agent	-----	Athens
Bradford, Dr. Wm.	- - -	Assistant Club Agent	-----	Atlanta
Maddux, H. T.	- - -	Editor	-----	Athens
Emerson, H. B.	- - -	Agent Animal Husbandry	-----	Athens
Martini, C. A.	- - -	Agent Animal Husbandry	-----	Athens
Marlatt, L. H.	- - -	Agent Dairying Extension	-----	Athens
Nisbet, W. R.	- - -	Agent Animal Husbandry	-----	Athens
Brashier, Dr. E. S.	- - -	Specialist Hog Cholera	-----	Athens
Fyle, Dr. C. A.	- - -	Field Veterinarian	-----	Athens
Blackshear, Laura	- - -	Illustrator	-----	Athens
Blackburn, R. E.	- - -	Extension Horticultural Agent	-----	Athens
Broach, W. E.	- - -	Extension Agent Agricultural Eng.	-----	Athens
Harris, R. C.	- - -	Extension Agent Drainage	-----	Athens
Smith, W. A.	- - -	Specialist Bee-Keeping	-----	Athens

Tabor, Paul	Extension Agent Agronomy	Athens
Ward, Frank C.	Extension Agent Agronomy	Athens
Westbrook, E. C.	Extension Agent Agronomy	Athens
Howell, W. H.	Extension Dairyman	Athens
Brown, Harry L.	Extension Live Stock Agent	Athens
Gridley, Ross M.	Extension Live Stock Agent	Athens
Wallace, Carl	Assistant Pig Club Agent	Athens
Zimm, Louis A.	Extension Forester	Athens
Whelchel, R. F.	Extension Schools	Athens
Thornton, A. M.	Assistant Editor	Athens

### Supervisors and Special Agents

Rast, L. E.	District Agent	Statesboro
Johnson, J. A.	District Agent	Carrollton
Brown, W. S.	District Agent	Monroe
Strahan, E. R.	District Agent	Marietta
Asbury, T. L.	District Agent	Madison
Ragsdale, Elmo	District Agent	Cornelia
Bryant, C. A.	District Agent	Granite Hill
Howard, R. P.	District Agent	Douglas
Williams, E. A., (col.)	District Agent	Savannah
Wilson, Mrs. Hoyle S.	District Agent	Valdosta
Mize, Mrs. Leila R.	District Agent	Commerce
Bond, Mrs. Ella G.	District Agent	Columbus
Andrews, Mrs. Edith M.	District Agent	Athens
Bozeman, Estelle	District Agent	Atlanta
Crews, Georgia	District Agent	Macon
Lanier, Katie D.	District Agent	Savannah
Cole, J. W.	Special Agent	Grainesboro
James, C. M.	Special Agent	Edison
Pittman, J. T.	Special Agent	Fitzgerald
Watson, O. D.	Special Agent, Chamber of Commerce Bldg.	Atlanta
Chandler, F. C.	Special Agent, Care Personel Dept.,	Fort Oglethorpe

### Specialists

Allen, Floride	Home Demonstration	Atlanta
Williams, Mrs. Mabel	Home Demonstration	Eastman
Mathews, Susan	Home Demonstration	Macon
Ward, Inez	Dairy Work	Athens
Smith, Maud	Poultry Work	Athens
McGee, Eva	Cheese Making	Augusta

### City Workers

Fulton, Lucy		Savannah
McAlpine, Martha		Augusta
O'Neal, Clyde		Columbus
Waxelbaum, F. Bettie		Macon
Ramsaur, Mrs. Louise		Atlanta
Tucker, Lucy		Rome

### County Agricultural Agents

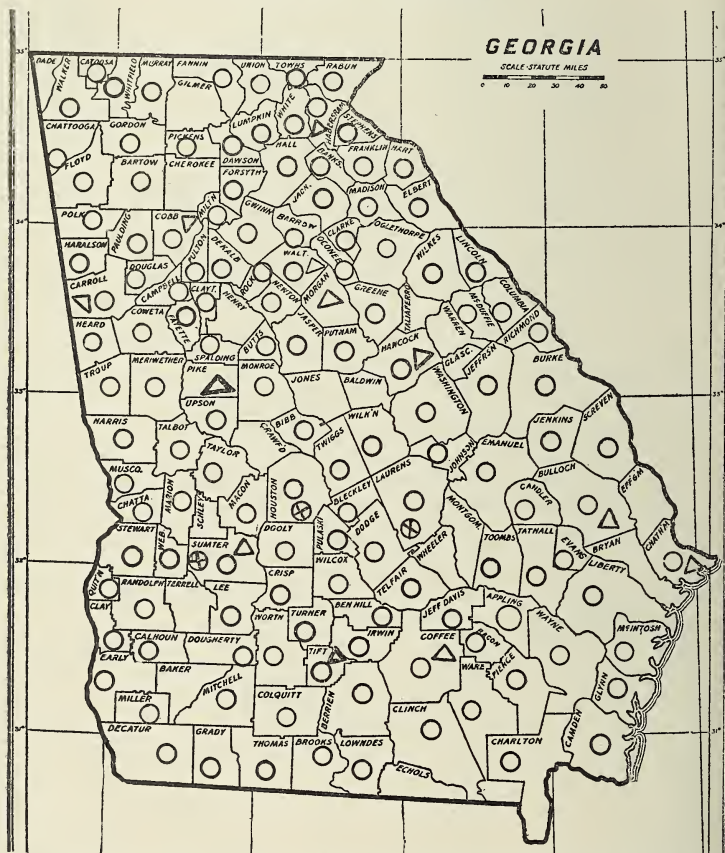
Appling	Rogers, Roy	Baxley
Bacon	Boggan, W. F.	Alma
Barrow	Hosch, W. H.	Winder
Bartow	Cox, C. H.	Cartersville
Ben Hill	Gaddis, M. W.	Fitzgerald
Bleckley	Lee, V. A.	Cochran



Bibb	Middlebrooks, W. G.	Macon
Brooks	Gaddis, M. F.	Quitman
Bulloch	Liddell, J. G.	Statesboro
Bulloch	Adams, B. S., (col.)	Statesboro
Butts	Blackwell, J. H.	Jackson
Burke	Strahan, L. C.	Waynesboro
Camden	Smith, W. R.	St. Mary's
Campbell	Cown, S. M.	Fairburn
Calhoun	Gibson, A. E.	Edison
Candler	Prance, H. J.	Metter
Carroll	Jackson, E. T.	Carrollton
Catoosa	Jones, W. C.	Ringgold
Charlton	Tucker, T. C.	Folkston
Chatham	Dent, Gratz	Savannah
Clarke	Purcell, Jones, Crt. House	Athens
Clarke	Stone, Percy, (col.)	Athens
Clay and Quitman	Treadwell, D. M.	Georgetown
Clayton	Huie, W. P.	College Park
Clinch	Gaddis, C. H.	Homerville
Cobb	McMahan, E. O.	Marietta
Colquitt	Stratford, R. A.	Moultrie
Coffee	Bowers, W. E.	Douglas
Coweta	Drake, B. M.	Turin
Coweta	King, W. R., (col.)	Newnan
Columbia	Skinner, L. I.	Harlem
Cook	Wier, H. C.	Adel
Crisp	Turner, J. M.	Cordele
Decatur	Davis, J. I.	Bainbridge
DeKalb	Carr, M. Earl	Decatur
Dodge	Burch, R. F., Jr.	Eastman
Dougherty	Cromartie, H. L.	Albany
Dougherty	Patterson, G. W., (col.)	Albany
Douglas	Cheatham, J. E.	Douglasville
Early	Martin, C. E.	Hilton
Emanuel	Rowan, R. C.	Swainsboro
Evans	Brandon, T. B.	Claxton
Fannin	Nitschke, A. J.	Blue Ridge
Fayette	Dixon, W. N. D.	Fayetteville
Floyd	Adair, S. B.	Rome
Forsyth, Lumpkin		
Dawson & Banks	Baker, Eugene	Gainesville
Franklin	Hall, O. D.	Carnesville
Fulton	Sawyer, D. E., Court House	Atlanta
Fulton	Hatcher, W. W., (col.)	Atlanta
Greene	West, Wade H.	Greensboro
Glynn	Arnold, J. W., Jr.	Brunswick
Gordon	Turk, J. L.	Calhoun
Grady	Ward, Pat H.	Cairo
Gwinett	Robison, A. G.	Lawrenceville
Habersham	Carswell, P. D.	Clarksville
Hancock	Driskell, W. W.	Sparta
Haralson	Hatfield, W. A.	Buchanan
Hart	Warren, J. H.	Hartwell
Heard	Tompkins, Levi R.	Franklin
Houston	Howard, R. H.	Perry
Houston	O'Neal, O. S., (col.)	Fort Valley
Irwin	McGee, E. P.	Ocilla
Jackson	McConnell, Noel	Commerce
Jasper	Womack, Mark S.	Monticello
Jeff Davis	Hursey, A. B.	Hazelhurst

Jefferson	Shirley, C. V.	Louisville
Jenkins	Parrish, H. H.	Millen
Johnson	Bridges, Fred T.	Wrightsville
Laurens	Tyre, J. B.	Dublin
Laurens	Robinson, W. F., (col.)	Dublin
Lee	Sorrells, W. H.	Leesburg
Lee	Simms, J. U. H., (col.)	McIntosh
Lincoln	Foster, B. F.	Lincolnton
Lowndes	Brooks, W. S.	Valdosta

### Extension Work By Men

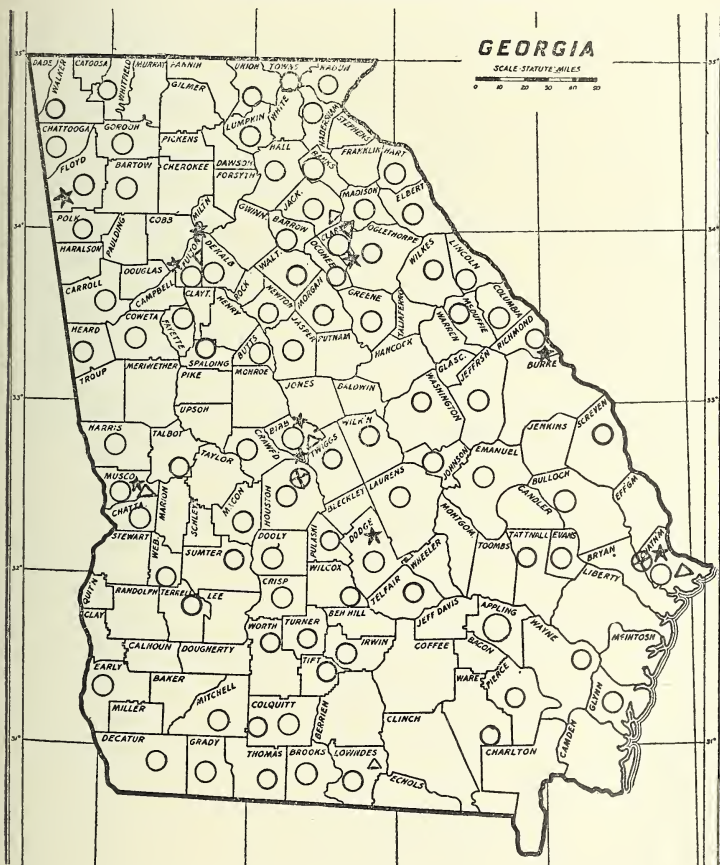


The circles show the location of men county agents and the triangles are for district supervisors. The crossed circles are for negro agents.

Macon and Taylor	Still, D. D.	Oglethorpe
Madison	Long, W. S.	Danielsville
Meriwether	Rice, G. E.	Manchester
Miller	Pinkston	Colquitt
Milton	Parker, T. L.	Alpharetta
Monroe	Worsham, H. L.	Culloden, R. 3
Muscogee & Chatt.	Jenkins, F. L.	Upatoi

McDuffie	Clarke, W. W.	Thomson
Murray	VanSant, Robt. L.	Chatsworth
Newton	Luck, J. K.	Covington
Oconee	Truitt, S. D.	Watkinsville
Oglethorpe	Porter, T. S.	Lexington
Paulding	Burns, W. S.	Dallas
Pierce	Wiley, T. B.	Blackshear
Pickins	Clute, R. L.	Jasper
Polk	Garner, W. H.	Rockmart
Pulaski	Watson, L. S.	Hawkinsville

## Extension Work By Women



County home demonstration agents are represented by circles, district agents by triangles, specialists by stars, negro agents by crossed circles.

Putnam	Norwood, H. P.	Eaton
Randolph	Boyette, W. J.	Cuthbert
Rabun	Arrendale, J. V.	Clayton
Rockdale	Blackwell, R. L.	Conyers
Richmond	McConnell, Bright	Hepzibah
Richmond	Willoughby, S. J., (col.)	Augusta



Spalding	Bennett, W. T.	Griffin
Spalding	Lee, S. H., (col.)	Griffin
Stephens	South, J. W.	Toccoa
Stewart & Webster	Culpepper, C. B.	Thomasville
Sumter	Williford, T. Y.	Lyons
Sumter	Lewis, C. C.	Richland
Tatnall	Marshall, G. E.	Americus
Talbot	Stallsworth, Elbert (col.)	Americus
Telfair	Brandon, Jno. D.	Reidsville
Tift	Jeter, Fred D.	Talbotton
Thomas	Whatley, W. F.	McRae
Toombs	Dixon, A. M.	Tifton
Towns	Johnson, G. L.	Hiawassee
Troup & Haris	Garner, C. G.	LaGrange
Turner	McCord, R. O.	Ashburn
Twiggs	Thomason, J. E.	Jeffersonville
Union	Stone, B. H.	Blairsville
Upson	Nelson, C. F.	Thomaston
Walker	Veatch, A. C.	LaFayette
Walton	Bingham, H. W.	Monroe
Ware	Walker, L. C.	Waycross
Ware	Hinesman, A. H., (col.)	Waycross
Wayne	Shedd, J. P.	Jesup
Washington	Cliett, H. A.	Sandersville
Washington	Tabor, Alva, (col.)	Sandersville
Whitfield	Smith, C. O.	Dalton
White	Robertson, A. D.	Cleveland
Wilkes	Burdette, J. L.	Washington
Wilcox	Childs, W. S.	Rochelle
Wilkinson	Kemp, H. H.	Irwinton
Worth	Sealey, J. R.	Sylvester
Chattooga	Wheeler, A. J.	Summerville
Berrien	Stone, W. A.	Nashville

#### Home Demonstration Agents

Appling	Parker, Mrs. Frankie	Baxley
Bibb	Houston, Irene	Macon
Brooks	Pedrick, Cobbie	Quitman
Bulloch	Harris, Hortense	Statesboro
Banks	McCoy, Addie B.	Homer
Barrow	Dillard, Rose	Winder
Bartow	Callaway, Matilda	Cartersville
Butts	Butner, Mrs. Mary E.	Jackson
Carroll	Whatley, Mrs. V. D.	Carrollton
Clarke	Oliver, Eldona	Athens
Coweta	Collins, Lorine	Newnan
Chatham	Carter, Lois	Savannah
Chatham	Conyers, Juanita V., (col.)	Savannah
Chattahoochee	Rushin, Mrs. Berta C.	Cusseta
Chattooga	Morrison, Mary J.	Summerville
Colquitt	Henderson, Texas	Moultrie
Colquitt	Whitfield, Mattie	Moultrie
Columbia	Baker, Gladys	Appling
Crisp	Hamilton, Lou	Cordele
Crawford	Champion, Beulah	Roberta
Decatur	Stokes, Margaret	Bainbridge
Dodge	Morrison, Mrs. Mabel	Eastman
Dooly	Scott, Audrey	Vienna
DeKalb	Burge, Margaret	Decatur
Elbert	Peek, Lula	Elberton



Emanuel	-	-	-	-	Morris, Roberta	Swainsboro
Early	-	-	-	-	Weaver, Carruth	Blakely
Evans	-	-	-	-	Thorpe, Mrs. L. V.	Claxton
Fayette	-	-	-	-	Dickson, Leila	Fayetteville
Floyd	-	-	-	-	Farrar, Elizaebth	Rome
Fulton	-	-	-	-	Shannon, Floy	Atlanta
Gordon	-	-	-	-	Floyd, Woffie	Calhoun
Greene	-	-	-	-	Williams, Ruth	Greensboro
Glynn	-	-	-	-	Anderson, Marie	Brunswick
Grady	-	-	-	-	Cleveland, Emiline	Cairo
Habersham	-	-	-	-	Saunders, Elizabeth	Clarksville
Hall	-	-	-	-	Rogers, Rosa Lee	Gainesville
Harris	-	-	-	-	White, Mrs. Hettie M.	Chipleay
Hart	-	-	-	-	Miller, Annie Maud	Hartwell
Heard	-	-	-	-	Thompson, Lyra	Franklin
Houston	-	-	-	-	Miller, Louise	Perry
Houston	-	-	-	-	O'Neal, Mrs. Jennie, (col.)	Fort Valley
Irwin	-	-	-	-	Baker, Ida M.	Ocilla
Jefferson	-	-	-	-	Freeman, Buna W.	Louisville
Johnson	-	-	-	-	Massey, Clemmie	Wrightsville
Jasper	-	-	-	-	Phillips, Mrs. Ida M.	Monticello
Jackson	-	-	-	-	Collier, Lurline	Jefferson
Lincoln	-	-	-	-	Freeman, Eunice	Lincolnton
Lumpkin	-	-	-	-	Moore, Irene	Dahlongega
Laurens	-	-	-	-	Shelor, Ethel	Dublin
Lowndes	-	-	-	-	Whittlesey, Maggie	Valdosta
McDuffie	-	-	-	-	McDonald, Aline	Thomson
Madison	-	-	-	-	Greene, Nellie F.	Danielsville
Morgan	-	-	-	-	Offutt, Mrs. Mary S.	Madison
Macon	-	-	-	-	Nelson, Mrs. Kate W.	Oglethorpe
Mitchell	-	-	-	-	Bailey, Myrtle	Camilla
Muscogee	-	-	-	-	Fortson, Jessie	Columbus
Newton	-	-	-	-	Edwards, Lula	Covington
Oconee	-	-	-	-	Dowdy, Willie Vie	Watkinsville
Oglethorpe	-	-	-	-	Sasser, Mrs. Otie S.	Crawford
Polk	-	-	-	-	Bailey, Pauline	Cedartown
Pierce	-	-	-	-	Wiley, Mrs. Annie W.	Blackshear
Pulaski	-	-	-	-	Smith, Sarah A.	Hawkinsville
Rabun	-	-	-	-	Little, Erma L.	Clayton
Richmond	-	-	-	-	Emerson, Nora	Augusta
Spalding	-	-	-	-	Sibley, Mrs. Myrtie S.	Griffin
Screven	-	-	-	-	Merritt, Mrs. Madge B.	Sylvania
Sumter	-	-	-	-	Williams, Mrs. Edna M.	Americus
Tattnall	-	-	-	-	Bethea, Maggie	Reidsville
Telfair	-	-	-	-	Harris, Lula L.	McRae
Terrell	-	-	-	-	Gurr, Mrs. Helen	Dawson
Tift	-	-	-	-	Clark, Mrs. Tassie O.	Tifton
Thomas	-	-	-	-	Forrest, Lillia	Boston
Turner	-	-	-	-	Bass, Julia	Ashburn
Twiggs	-	-	-	-	Dunevent, Bertha	Jeffersonville
Talbot	-	-	-	-	Coram, Beatrice	Talbotton
Towns	-	-	-	-	Brawner, Addie	Hiawassee
Union	-	-	-	-	Phillips, Zelia	Blairsville
Walker	-	-	-	-	Clark, Martha	LaFayette
Walton	-	-	-	-	Sheats, Mrs. Annie B.	Monroe
Whitfield	-	-	-	-	Strickland, Annie May	Dalton
Wilkes	-	-	-	-	Davis, Mabel	Washington
Wilcox	-	-	-	-	Johnston, Eliza	Abbeville
Ware	-	-	-	-	Atwell, Mrs. T. B.	Waycross
Washington	-	-	-	-	Brawner, Ola	Sandersville

Wayne	Bennett, Mrs. Annie	Jesup
Webster	Schley, Mortimer	Preston
Worth	Overby, Mary A.	Sylvester

### Reports of the Several Divisions

Your attention is respectfully directed to the reports of the heads of our several divisions which have been submitted for your advice and information. In this report it is only possible to include the briefest summary of some of the principal activities in which our workers are engaged. It is evident to anyone who takes the trouble to investigate the matter, that the nature and character of the work being carried forward is becoming more and more valuable to the people of Georgia, and that data of the utmost importance to our primary industry is being gathered together and formulated on a basis which makes it available for everyday use.

In most institutions professors are employed primarily to do teaching work. In this institution they not only teach the usual number of hours but they supervise and direct divisions of considerable magnitude and in which a great variety of problems are being developed and investigated. Our men are, therefore, exceedingly busy and work long hours. They also are employed on an eleven months' basis. Under the stress of war they have had to work practically all the year, and now that peace is in sight and we are endeavoring to provide for instruction in vocational agriculture to aid in the training of wounded men and to give special summer courses for which there is a distinct demand by the citizens of our state, the duties and responsibilities of our professors will apparently be increased instead of lessened. The fact that only 15 out of 27 members of our staff have as yet been discharged will indicate to you the extra burden which most of our men have carried cheerfully during the war period. The scarcity of competently trained men was such as to make it impossible to fill quite a number of vacancies, and the work of these men has been carried forward by their associates. This, I think, emphasizes the fine coöperative spirit which has existed in this institution. The motto of our men and women at all times has been "Service first."

The College is now a greater center of concrete knowledge for the people of Georgia than ever before. Aid and advice is being sought by an ever-increasing number of farmers who write in for specific information. Various business and commercial organizations are seeking assistance from the College. It is very gratifying that in the great majority of instances we have been able to respond and immediately furnish the data requested.

In spite of the high cost of living and many advantageous offers to enter the employment of other institutions or to engage in business enterprises we still retain the services of a majority of our professors and instructors. We cannot expect a situation such as this to last indefinitely, for in spite of the highest ideals by which

man may be actuated it is necessary for him to live and to feed and clothe his family. With increases in cost ranging from 100 per cent to 200 per cent what are our professors to do, since it has been impossible with the funds at your command to raise their salaries since 1914? It has taken twelve years of the most strenuous effort to organize the work of the College on its present basis. What has been accomplished is not to be accredited to any individual, but to the united sympathetic, coöperative effort of everyone who has been associated with the institution. It is seldom that a group of men and women can be brought together to work in finer harmony or with a more unselfish spirit or with a greater zeal than has been evidenced by the staff of this institution. It would be a misfortune to have it broken up. It will be an injustice to those who have worked so long and faithfully if they cannot be rewarded by a reasonable increase in salary. I place these facts of the utmost importance to the future welfare of the institution before you. I believe you will find a way to remedy this situation and that if the members of the legislature once understand how serious the condition is they will rally to your support and provide the funds needed to enable you as Trustees to pay living salaries to your employees.

#### Activities of the Several Divisions

In accordance with your expressed wish the work of the College of Agriculture is still being developed along the three lines of instruction, research and extension teaching. The record of our men in the war indicates that the training they received, while technical in the correct sense of the word, was sufficiently broad to provide them with a liberal education. The type of education you are promoting has received a severe test and has made good under the most trying of conditions. This will no doubt be gratifying to you, will encourage our student body and will reward our professors for the labor and zeal they have lavished on the student body. The institution still stands for the highest idealism it is possible to attain in education. It still emphasizes service above self, and it still asks that fundamental education be made as broad and comprehensive as possible; that the men and women graduating receive at the same time a sufficient amount of technical instruction to enable them to follow out definite vocations with success immediately after graduation. That we are weaker along this line than in any other respect was evidenced by experiences we had throughout the war. It was rather disconcerting to find that in spite of all we had accomplished, for instance, in the way of manufacturing and distributing automobiles we were without men well enough trained technically to operate them for our army, unless they were first equipped through courses such as this institution was able to establish and maintain.

It is needless to point out that our agriculture and our home industry suffered more from lack of trained leadership than from any



other cause. This institution is striving with all the powers at its command to aid in creating that great reservoir of trained experts needed to correct the defects in the practices we now follow. With these men and women we must eliminate in a large measure the waste of human and economic material which now goes on at such an appalling rate, and by conserving the energies of our people and replacing the vagaries of the imagination with concrete facts make definite and uniform progress, happiness and prosperity the just inheritance of future generations. To this end the College is also encouraging research work, for new truth is a difficult thing to discover and to so understand and interpret as to make it of benefit to mankind.

In nearly every field in which we are interested we find progress blocked by a veritable stone wall which can neither be circumvented nor over-ridden except through the patient toil and industry of trained research workers who may be called on to devote a year or a life time to the solution of a problem infinitely simple when it is answered, but which until it is unraveled effectively blocks the forward march of humanity. Fortunately, the staff of the College of Agriculture has been able to aid in bringing to light many simple truths, and so correlating their findings as to make them of great value to the people of Georgia. Then after having discovered facts, it also has been one of the first and most efficient leaders in the South in having the truth and information thus acquired scattered widely throughout the length and breadth of the state it serves through the agency of a splendid corps of extension workers.

Our greatest weakness is our inability to secure the funds with which to encourage research. This defect in our organization should be remedied immediately. I, therefore, feel that I should emphasize this matter as strongly as possible in this report. The whole fabric of our civilization is bound up in the problems of research. The progress we are destined to make will be measured by our achievements in this field. It will also determine the heritage of good things which may be made available for present and for future generations. Our greatest opportunity to serve the world lies through the channels of research, and if the type of our civilization which we espouse is to be a dominating factor in international affairs it must be buttressed and pillared by the knowledge gained through research.

#### Division of Extension

The Extension Division has had another good year and has left its impress on the farms and homes of the state. This work was first inaugurated in 1908 and the Georgia State College of Agriculture had the honor, therefore, of being a pioneer in this field. Starting in a small way with one or two projects it has developed until there are now 19 projects in effect. Each of these projects deals with some specific phase of either our agricultural or home eco-



nomics problems. All of the work of this division is organized so as to serve the best interests of the men and women and the boys and girls of Georgia. It appears that we are in personal touch, through our Extension Division, with more than 100,000 individuals, irrespective of the large number who are benefited by our publications or who are reached through personal letters. The projects in effect at the present time are as follows: Project 1, Administration; Project 2, Publications; Project 3, County Agents; Project 4, Home Economics; Project 5, Boys' Clubs; Project 6, Extension Schools; Project 7, Livestock Diseases; Project 8, Fair Exhibits; Project 9, Livestock; Project 10, Pig Clubs; Project 11, Poultry Clubs; Project 12, Agronomy and Farm Management; Project 13, Dairying; Project 14, Forestry; Project 15, Marketing; Project 16, Horticulture; Project 17, Agricultural Engineering; Project 18, Plant Pathology; Project 19, Beekeeping.

In spite of all the progress which has been made we are still unable to reach all the counties of the state, and while substantial increases are provided under the Smith-Lever appropriation bill from both state and federal sources, it will be a difficult task to cover a state as large as Georgia and with as many counties, even when the funds set aside for this work are all available.

#### County Agents' Work

The county agent movement has made rapid progress in the state of Georgia during the last two years and each county has had the service of either a county agent or a joint county agent in some instances with another county. In 1918-1919 one hundred and fourteen county agents were employed in coöperation with the county boards of roads and revenues. In addition to this number, four special county agents were employed to conduct club work and other forms of demonstration work in the counties not having a county agent. Twelve supervising agents were employed in coöperation with a number of the district agricultural and mechanical schools. In most instances the funds secured from counties and the district schools were contributed for the expenses of the agents while their salaries were paid from State and Federal money known as Smith-Lever funds.

In addition to the regular Smith-Lever funds, there was assigned to Georgia from the War Emergency Fund a total of \$202,000 the last year. This, together with the funds contributed from the counties, has enabled the College of Agriculture to extend its general activities to all parts of the state as well as to have county agent work in some form in every county. The increased production and the conservation of food and feed stuffs have more than paid for the expenditure of the funds thus indicated.

Many of our young men county agents who resigned to go into military service have returned to their counties since the signing of the armistice. In every instance they have shown a new spirit and

interest in this work and already the organization is being improved as these men re-enter their former positions.

Perhaps the most important constructive piece of work done in connection with the county agent movement has been the developing of leadership in the organization of the county farm bureaus in seventy-six counties of the state. The farm bureau is filling a place in the county agent work above mere individual service and is causing it to reach the plane intended from the first, that of an educational factor rather than general service to individuals.

The efforts of the agents through the farm bureaus hinge about a program of work laid out by the program committee of the advisory board with the help of the agent. This program shows the need after all conditions have been carefully considered. Committees are then assigned to the various items of the program in the different communities of the county and the agent serves as the instructor and advisor in helping people solve their problems. In this way the farm bureau is of greatest usefulness. The agent is secretary of the advisory board and makes reports to the board of the progress of the work.

Below is a sample of an agent's report for the month of April:

"During the month I have traveled 653 miles on duty; made 93 visits to farmers doing regular work with us; visited 28 other places by request; made 31 visits to club members and measured land for several corn club acres; made 4 visits to schools and instructed club members and others in corn growing and pig feeding; have given 8 spraying demonstrations in home orchards with 66 people present; have written 45 letters; sent out 50 bulletins issued by the College of Agriculture; have answered 37 calls over the 'phone for information; have conferred with 123 persons in the office who were seeking information on various subjects and have attended 2 committee meetings of the advisory board with 81 members present."

Considering the excellent service they render and the great expense they have, our county agents are woefully underpaid. Many county agents work ten to twelve hours a day and then hold night meetings over the county. Conservative business men in several counties have stated that their county agents are worth at least ten thousand dollars a year to the county.

When one stops to consider the heavy expense entailed upon a county agent for travel, it is easy to understand that the salary is meager for this kind of service. The agent must provide himself with an automobile, office supplies, field equipment. The first cost of equipment including automobile ranges from \$750 to \$1,000, the life of which equipment is usually about two years. Therefore, the distributive cost not including the interest on the investment is about \$500 annually. This does not include the upkeep of auto and

other traveling expenses. The average cost of gas, oil and repairs for a car is about \$62.50 per month or \$750 per year. The cost of upkeep of auto plus the purchase price makes the expenses of the county agent work to the agent himself \$1,000 to \$1,200 annually. Therefore in \$1,500 to \$2,000 salary, an agent has hardly enough left for ordinary living expenses.

For this reason we have lost many competent agents who have had to seek other means of livelihood. During the past year 16 have resigned to enter more lucrative positions.

The War Emergency Fund has helped somewhat during the past year in saving some of the best agents. Furthermore the spirit of sacrifice during the war has encouraged many to stay with us who would have resigned for lack of adequate pay. Now that the war is over a serious situation confronts us with respect to the Emergency Appropriation. Therefore, unless the incoming State Legislature offsets the Smith-Lever fund completely, we may lose a considerable body of well-trained men and women who are especially fitted for the extension work.

The funds available for Extension Service in 1918-1919 were received from a number of sources, special appropriations coming from the offices of county commissioners and ordinaries, boards of education, boards of trade, fair associations, corporations, women's clubs, banks and individual citizens. County funds for home economics and demonstration work amounted to \$133,862.00 and this does not include \$27,500 which was given in prizes and premiums to club boys and girls. Thus it appears that the people have given directly \$161,362 to the support of agricultural extension work within the state. From the States Relations Service of the United States Department of Agriculture there was the regular appropriation of \$45,000 and in addition to this an extra appropriation of \$202,000 for expansion of the work along war emergency lines, the extra appropriation being spent in food production campaigns and in employing special workers to teach the people how and what to save to help in winning the war.

The Federal appropriation for Smith-Lever Extension Work in 1918-1919 was \$98,107.14, the initial appropriation of \$10,000 requiring no offset. From the various bureaus of the United States Department of Agriculture in Washington indirect appropriations amounting to \$50,000 were obtained.

An instance of how the advisory board of a farm bureau is of service to the county in advancing the agent's work we mention this. Recently an agent found twenty-four boys who wanted to become calf club members but could not afford to purchase the calves of the right type to feed out to the best advantage. This was brought to the attention of the advisory board. The board members, with the agent, called on one of the bankers of the county and agreed to become responsible with these twenty-four boys for the purchase



price of the calves needed. The calves were bought and the boys are now busy learning how to feed calves for profit. In this same county the county commissioners permit the advisory board of the farm bureau through the agent to use \$2,000 of the county's money as a revolving fund for the purpose of bringing into the county better cattle and hogs and also making other improvements. This fund is kept intact so the county loses only the temporary use of it from time to time. Many other instances can be mentioned of how the people are becoming more and more interested in helping themselves through the leadership of the county agent.

The county agent's duties are many and varied. Special attention has been given to individual farm demonstrations, excursions to special demonstrations, farms and other places of interest. With the individual farm, the demonstrations are conducted in relation to soil building, general farm crops, all phases of live stock and marketing problems. Under soil building considerable progress has been made in drainage, terracing, stumping, in the use of lime, farm manures, and soiling crops, and the rational use of commercial fertilizers. In this connection preparedness to meet the boll weevil as well as food production for war time emergency has been taken into account. This effort toward a proper method of balanced farming constitutes the greatest part of the agent's work.

Records of demonstrations in general farm crops and of miscellaneous demonstrations are given below.

#### Demonstrations in General Farm Crops

Crop	Demonstrations	Acres planted	Average yield
Corn - - - - -	8,872	74,521	28 bus.
Cotton - - - - -	5,378	66,348	964 pounds
Oats - - - - -	5,041	34,720	17 bus.
Wheat - - - - -	24,188	54,812	16 bus.
Alfalfa - - - - -	864	2,566	2 tons
Velvet beans - - -	7,967	85,021	11 bus.
Tobacco - - - - -	259	842	506 pounds
Peanuts - - - - -	7,368	46,702	39 bus.
Soy beans - - - - -	748	3,740	12 bus.
Cow peas - - - - -	8,765	60,743	18 bus.
Sweet potatoes - -	892	1,778	191 bus.
Hay crops - - - - -	4,951	22,836	2 tons
Total - - - - -	75,293	454,629	

#### Miscellaneous Demonstrations

Kind of Demonstration	Number
Hog grazing - - - - -	5,635
Pasture (annual and perennial) - - - - -	1,765
Beef feeding - - - - -	192
Dairy cattle feeding - - - - -	143
Meat curing - - - - -	1,682
Orchard pruning - - - - -	3,306
Orchard spraying - - - - -	1,846
Gardens planted or improved - - - - -	16,007
Roads improved - - - - -	58
	<hr/>
	30,634



The facts presented show that the county agents have carried out 75,293 demonstrations in general farm crops on 454,629 acres. The average yield of corn was 28 bushels per acre, cotton 964 pounds of seed cotton, oats 27 bushels per acre, and wheat 16 bushels per acre. Special emphasis was given wheat production by all agents and the number of demonstrations as well as the average acre yields stand as proof of their successful effort in this respect.

Excellent work was done in fostering the growing of livestock. In grazing demonstrations there were 5,635 farmers who worked with the county agent to get better results in grazing crops, and 1,765 farmers aided by the agents improved or started permanent pastures. The agents have conducted 5,152 demonstrations in orchard spraying and pruning, thus encouraging the growing of better fruit on the farm for family use. The total number of all demonstrations held with farmers was 105,927. Many of these demonstrations were not only valuable to the farmers with whom they were conducted but to other farmers of the communities as well.

In addition to the many demonstrations, the agents were called on to perform other kinds of work which are partially given below:

#### General Service Work of County Agents

Horses, cattle, hogs and sheep bought for owners -----	15,230
Hogs treated against cholera -----	252,763
Cattle treated for simple diseases -----	785
Cheese factories built -----	1
Cream routes started -----	35
Buildings constructed by plans furnished -----	2,113
Silos and dipping vats constructed -----	2,140
Number pieces of farm implements and farm equipment bought -----	18,331
Visits made by agents to farmers -----	77,107
Visits to boys' and girls' club members -----	24,966
Number of meetings held -----	4,400
Estimated attendance -----	170,454
Number of letters written -----	48,703
Number of articles written for county papers -----	2,051
Number of circular letters sent out -----	135,401
Number of bulletins distributed -----	213,344
Number of miles traveled -----	968,430

As is shown, the county agents have been called upon to treat a good number of livestock diseases. When it is recalled that only forty-three counties have the service of a graduate veterinarian, the rapidly increasing interest in the growing of livestock makes this one of the serious problems of the livestock industry of the state. The county agents are giving such attention as their limited training in disease control will permit. They do not pose as veterinarians but in sections where there is a veterinarian they encourage the people to call on him. It will be noted also that the agents have been instrumental in getting farmers to buy better breeding stock to the number of 15,230 horses, cattle, hogs and sheep. The agents have aided in construction of 2,140 silos and dipping vats.

The county agents have advised 10,302 farmers of the most intelligent methods in the purchase and use of commercial fertilizers. Recently three agents reported that their advisory boards of the county farm bureau have been able to save in the purchase of acid phosphate \$15,000 to the farmers in the counties. This saving alone is considerably more than the salaries of the agents, not to mention the many other ways they have rendered service to their counties. The agents have handled through the county organization the sale of Government nitrate of soda. They took the orders for more than 60,000 tons of soda, aided in its distribution and arranged with banks to handle the payment for it.

The agents have aided in all such war drives as the sale of Liberty Bonds and War Savings Stamps, Y. M. C. A. drives, Red Cross drives, and others. The agents directed the work in the country districts, and in a few instances the entire county.

### Boys' Agricultural Clubs

Believing that often the best way to touch the father is through the son and that a permanent system of agricultural education must begin with the child, club work was inaugurated in Georgia in 1910. The first club movement began with the organization of corn clubs and it has grown so that today we have calf clubs, pig clubs, wheat clubs, peanut clubs, potato clubs and several others. The enthusiasm of the boys has spread to the fathers and we find our state today is no longer dependent upon other sections of the country for a large proportion of her corn, meat and wheat as she was in 1910.

While all the increase is not to be attributed to the pig club boys, still a remarkable growth has been made in our swine industry. At least they have been instrumental in growing thousands of purebred hogs, where they had never been grown before. It is of interest to note that Georgia is now furnishing herself with all the pork and pork products which she needs.

Spurred on by patriotic fervor and enthusiasm agents have enrolled 21,853 boys in some form of club work and their records are as follows:

#### Club Work for White Boys in 1918

Name of Club	Production	Value
1. Corn - - - - -	207,713 bushels	\$311,569
2. Pig - - - - -	8,678 pigs	268,025
3. Calf - - - - -	1,124 calves	61,820
4. Wheat - - - - -	14,280 bushels	29,560
5. Miscellaneous clubs (peas, potatoes, peanuts and velvet beans)		14,945
6. Emergency clubs (crops and livestock valued at) - - -		91,278
		<hr/>
		Total value, \$776,197

## Club Work for Negro Boys in 1918

Name of Club	No. Boys Engaged	Amount Grown	Value
1. Corn - - - -	1640	32,800 bus.	\$49,200
2. Pig - - - -	280	312,000 lbs.	46,800
3. Calves - - - -	320	96,000 lbs.	7,580
4. Poultry - - - -	720	7,200 lbs.	3,600
5. Miscellaneous	210		4,200
Total - - - -	2170		\$111,480

From the facts given above it will be seen that the total club work last year in Georgia amounted to \$887,677, all of which wealth was added to the general income of the state at small expense and in lieu of the spare time of 21,853 boys, most of whom would not have been engaged in profitable work had it not been for the help and encouragement of the county agents. Club work has given these young people a touch of real life and is making of them even at a young age self-confident and self-supporting citizens. It is such education as this that must come to all our people before they enjoy uniform prosperity.

The story of Hal Vaughn, an eleven-year-old boy of Clarke county, is a good example of the club work that is being done by our boys. During the last year, besides going to school for nine months and supplying a family of six with all kinds of fresh vegetables, he has produced \$428.45 worth of corn, hogs, chickens, Irish potatoes and garden crops. He won prizes in almost all of his work, one of them being a short course scholarship at the State College of Agriculture. Under adverse weather conditions he made the best corn crop in his county, a production of 53 bushels per acre. He cleared \$65.50 from his corn. With a total capital of \$16.75, as his poultry record shows, he declared a net dividend of \$49.45 after paying all of his expenses in the poultry work. In addition to the excellent record he made in the boys' work, Hal won the canning club prize from the girls of Clarke county.

Hal makes a final business statement which is most interesting:

### FINAL BUSINESS STATEMENT OF A CLUB BOY

10 pigs raised in first litter -----	\$ 99.50
13 pigs raised in second litter -----	104.00
Chickens and eggs raised and sold -----	66.20
Fresh vegetables sold -----	11.00
Fresh vegetables supplied family -----	23.00
125 quarts of vegetables and fruit preserved -----	18.75
53 bushels of corn at \$2 per bushel -----	106.00
Total receipts -----	<u>\$428.45</u>

The calf clubs in the state have made an excellent record this year. Beef was produced at 4½ cents per pound and the average profit made on each calf fed was \$35.00. There was \$9,875.00 in prizes offered by the Central of Georgia Railroad, fairs and cattle breeders' associations.

The wheat club members produced an average of 17 bushels per



acre at an average cost of \$1.12 per bushel. In many instances club members grew wheat in communities where it had not been grown before.

No club has grown so fast or has done better work in recent times than has the pig club. Fourteen school pigs were raised in one county from the waste of the lunch baskets, and they were sold at an auction sale for \$590.00. The state champion in the pig club work was the eleven-year-old son of a one-horse farmer who bought his pig at an auction sale for \$37.50. Today it is worth \$300.00. Of the 2,105 hogs at the Southeastern Fair last fall, 345 were owned and raised by pig club boys who won 39 ribbons in the open ring and \$272.00 in prizes. One of the ribbons was a junior champion.

The records so far indicate that we will have the largest club enrollment in our history at the close of 1919. Already we have reported 20,570 boys. They are divided among the different clubs as follows:

#### Boys' Club Work, Enrollment to June, 1919

Corn Clubs -----	5,420
Pig Clubs -----	9,020
Calf Clubs -----	1,290
Wheat Clubs -----	1,040
Miscellaneous Clubs -----	2,060
Farm Makers' -----	1,740
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Total enrollment to date -----	20,570

#### HOME BUILDING ACTIVITIES

The organization of home demonstration work in Georgia during the year just closing included ninety-eight counties in each of which a county agent was in charge. There were supervising these workers eight district agents and two assistant state agents. Up to September 1, 1918, these district agents spent a part of their time doing emergency food conservation work in cities. Special city workers were employed in Atlanta, Augusta, Columbus, Macon, Rome and Savannah. In addition to this there were eight special agents who carried on the war emergency work in unorganized counties. Two negro agents in charge of small groups of counties have been employed for the entire year and forty-seven negro county agents, who during the school term are industrial workers under the Jeanes Foundation, were employed for the months comprising the growing season so as to organize and conduct the campaign for food production and conservation among the negroes in their counties.

For guidance in carrying on home demonstration work a handbook was written for the county agent. It is used by the district agent in assigning to each county agent the program of work for the year. Already the definite assignment of work in this manner is bringing about more efficiency, a more systematic development of work, and a greater degree of success in adapting the work to



the needs of the county and securing progress from year to year.

Divisions of work now formulated in this manner include the following: Annual and perennial gardens for women and girls; preservation and marketing of garden products; production and use of home dairy products; products and use of poultry products; food conservation measures as demanded from time to time under new conditions; home management and labor saving equipment; problems of sanitation and health (which must be considered largely in an indirect and incidental manner); the conservation of clothing; the problem of utilization of food products to include the necessary consideration of food value and a helpful diet for various members of the family, especially demonstrations in child feeding and the preparation of the school lunch; development of community enterprises which grow out of the individual and group demonstrations of women and girls; and beautifying home grounds.

To carry on these lines of demonstrations individual work in homes, community and county organization, county, district and state short courses, extension schools, work in teachers' institutes, and contributions in the meetings of various organizations as well as other phases of coöperation with these organizations are used.

During the season just closed there were organized 7,556 girls to conduct demonstrations with tenth-acre gardens. Among these girls there were organized 491 clubs which held during the year 5,953 meetings with a total attendance of 145,104 girls. Of the girls enrolled 3,386 rendered reports in acceptable form. From these reports the following total statistics have been secured:

#### Results from Girls' Gardens

Yield in vegetables from one-tenth acre gardens in pounds	2,342,038
Cans of tomatoes packed	512,974
Cans of string beans packed	71,535
Containers of pimento peppers packed	8,770
Containers of catsup and pickle	40,175
Containers of miscellaneous products	128,030
Total value of products	\$272,767
Total number of containers packed from farm and orchard	354,869

#### Results of Other Club Activities

Demonstrations in cooking club products	1,842
Demonstrations in bread making	757
Uniform caps and aprons made	4,021
Uniform dresses made	862
Miscellaneous articles in sewing	8,904

These girls reported the planting of 1,265 winter gardens and 542 perennial gardens. These perennial gardens included special demonstrations in the growing of figs, asparagus, new varieties of muscadine grapes, and other crops which need to be introduced whether for increasing the variety of food products in the home or furnishing a definite means of increasing the income of the club members. The introduction of a few new vegetables like New Zealand Spinach, the Chayote and Dasheen has aroused great interest and has met with gratifying success in a number of counties.

The girls' short course for prize winners was held at the College of Agriculture in August, 1918, and was attended by 117 girls. Twenty-five of these girls were sent to the College by the State Fairs, the other ninety-two being sent through the kindness of public-spirited county commissioners, county boards of education, women's clubs, bankers and business men. This work was planned with the view of helping the girls to perfect themselves in their special lines of work at home and enable them to become leaders in their clubs. The girls were allowed to carry back home with them the jars of fruits and vegetables which they put up in the laboratories and also the canning club emblems and cross stitch doilies which they made. We feel that in this way the girls were able to show to their co-workers at home just what they did at the College.

During the summer of 1919 at the same time the girls' short course is held here there will be a short course for farm women.

War conditions have interfered seriously with the conduct of poultry club work due to the fact that one after another of the agents in charge of this work had to give it up to enter military service. Another unfavorable factor is the lack of information as to poultry management on the part of the county agents. This is being met by the six weeks short course for county agents where a definite intensive course in poultry raising is taken by every agent in whose county poultry club work will be organized during the coming year.

There were forty-two counties in which poultry club work was done, 1,812 boys and girls being enrolled in clubs. Twenty-one counties were selected in which special work was to be done.

There were 711 women and 1,744 boys and girls who were selected as demonstrators. The records show that 666 took charge of the entire farm flock; 970 raised food for the flock; 606 used purebred males at the head of the flock; and 256 made brooders. The average number in the flock was forty birds. Members numbering 362 purchased purebred stock, 1,037 purchased purebred eggs, and 1,997 dozen eggs were preserved in water glass.

In twenty-five counties a total of 45,621 chicks were reared. Approximately 3,500 pounds of poultry were fattened for market according to instructions; 1,500 dozen eggs were sold coöperatively; and 230 purebred fowls were sold as breeders.

The poultry extension specialist attended the extension schools held at the district agricultural schools. Seven of these were visited. Lectures and demonstrations were given on breeds, feeds, diseases, poultry house construction, killing and dry-picking fowls for market, and preserving eggs in water glass.

There have been 8,935 women enrolled to carry on demonstrations in their homes. Of these there have been 5,787 reported who have carried on active work throughout the season. The home demonstration clubs organized during the past year number 567. The

county agents have made 7,225 demonstrations at meetings attended by 73,925 women.

For about five months of the past season's activities, a specialist in home dairy work in a limited number of counties in the state particularly emphasized the production of cottage cheese from skim milk as a war emergency, to meet the demand for meat conservation. It has been impossible, because of the disorganized conditions due to the epidemic of influenza, to secure full reports of this work. Reports indicate that 623 women were regularly making cottage cheese and that many others attended demonstrations and in varying degrees utilized in cottage cheese making skim milk which would have otherwise been lost as human food. The number of pounds of cottage cheese made during the summer months is estimated at 3,969 pounds.

Considerable increase has been made in the number and effectiveness of demonstrations made for the improvement of the quality and quantity of butter made in the homes. The reports show that 51,518 pounds of butter made under demonstration methods are reported in nineteen counties and in the same number of counties improved equipment to the extent of 294 thermometers, 577 barrel churns, 65 shot gun cans and 53 butter workers are reported.

Our specialist and agents have been very successful in adding a number of labor saving appliances and other useful equipment to country homes. The specialists report that 1,184 fireless cookers, 225 iceless refrigerators, 1,458 fly traps and screens, 75 ironing boards, 76 wheel trays and 2,070 other pieces of equipment have been built. They also aided in the installation of 80 water systems. Last week one agent reported that she had, with the aid of the club members in the town, been instrumental in having built forty-eight fireless cookers in her community.

The entire strength of the women's organization was placed behind the war time program of food production and conservation. The responses to the calls of the Food Administration were made promptly and enthusiastically. The organization of home demonstration agents directly influenced 100,000 women and girls who have carried on these activities. This program included the saving of meat, fat, wheat and sugar varying with the calls as conditions changed from month to month. One of the most completely organized and effective kinds of work was that of wheat conservation.

In the saving of wheat flour 3,077 demonstrations were given by our county agents, 860 other demonstrations by women volunteers whom we trained in the work of conservation and 1,507 by girls. The estimated saving in wheat flour from this phase of work is 1,010,531 pounds and practically all of this flour was sent abroad to our Allies in helping to win the war. When our boys and men were producing acres and acres of wheat, our women were doing equally as great a task in substituting other cereals than wheat in



order that our men in the trenches and in the training camps might be well supplied with this most essential product.

Under the direction of our county agents the women of our state canned, brined and dried fruits and vegetables worth approximately \$992,904.46 from the orchards, gardens, and farms. This record is submitted for your information:

#### PRESERVATION OF PERISHABLE PRODUCTS

Product	Number	Value
Containers of canned fruit and vegetables.	3,101,103	\$857,510.58
Gallons of brined vegetables -----	69,592	8,340.50
Pounds of dried fruit and vegetables---	326,059	127,053.38
Total -----		\$992,904.46

In the six large cities which have been definitely organized, work has been done in gardening, poultry raising, home dairy work, marketing of fruits and vegetables, conservation of the essential food to be shipped to Europe, and organization work for the purpose of helping with many war emergencies. In most places food conservation exhibits were held, the exhibits being worked out by the different schools in the cities under the direction of the urban worker. There have been home demonstration kitchens established in all of the cities and in many of the smaller towns as well. Much was done to meet the need for definite relief during the influenza epidemic.

Our six city workers have increased their organization to 824 regular members with 25 well developed demonstration units. There were 13 demonstration kitchens in which 1,093 volunteer workers spent some of their time. Our specialists held 414 meetings with a total attendance of 25,514 and taught the women of the city how to use wheat substitutes, how to manage and cultivate war gardens on vacant lots and how to can and preserve the surplus products from orchards and gardens. Under the direction of our city workers 38,600 containers of fruits and vegetables were packed, 300 gallons brined and 1,500 pounds dried and stored. Three community driers were constructed and 7 community canners.

Excellent work has been done in teachers' institutes. During the war emergency period the program among the teachers was enlarged to present every phase which teachers, as leaders, needed to present to their communities. A recent important line of demonstrations undertaken in teachers' institutes in certain counties and with definite relationship to the program of the county agent is that of the school lunches. With the presentation of this subject both through the teachers and through the mothers, linking it in the home with the utilization of products produced under demonstration method, it is believed that definite improvement will be made.

In connection with the teachers' institute 666 demonstrations



were conducted in food conservation by our specialists and 216 demonstrations in preparing and serving hot school lunches. In preparing for the club rally the agents would often supply the paraffine paper and aid the children in preparing lunches which they would actually enjoy later at picnics. A total of 540 rural schools were visited by our special agents.

### Coöperative Enterprizes

Through our coöperation with the various bureaus of the United States Department in Washington federal funds are brought to Georgia which would not otherwise come were it not for the fact that we have well developed departments to offer assistance. Each coöperative project which the United States Department of Agriculture places with us may be considered a compliment to our work and a recognition of our men and equipment.

Coöperative work has been maintained during the last year in the following kinds of work: Animal Husbandry, Animal Diseases, Poultry, States Relations Service, Farm Management, Marketing, Plant Pathology, Drainage, Entomology, and Bee-keeping.

A great deal of educational work in marketing has been carried on through extension schools, farmers' institutes, agricultural fairs, the public press, market associations, public meetings and other mediums. Plans have been furnished for grading, packing and proper storage of various products. Demonstrations have been held at strategic points. Model storage houses and packing sheds have been exhibited at the Fairs and attracted the attention of thousands of people.

Another feature of the market work has been the formation of county agents exchanges in which lists of products for sale have been distributed. Also lists of needs in various counties have been given, in this way the county agent in one county is enabled to have his farmers exchange with farmers in another county. Furthermore, this method of exchange is handled by county agents within a county in which farmers in one community are kept posted on the needs or surpluses in another community. In many instances a nearby market has been found for almost any supplies in the hands of farmers.

The Division of Horticulture is carrying on work in trucking, orchards, Gardens, bee-culture and insect control in 67 counties within the State. Orchard Clubs and Potato Clubs have been organized in a number of counties.

A special line of work receiving attention by this division has been the control of diseases and insects. The Horticultural Specialist has been instrumental in having 48 spray pumps purchased and several hundred thousand trees and large areas of garden products have been sprayed under his supervision in coöperation with county agents.

In 1918 the peach growers of Georgia produced and saved two

A new phase of work taken up in January, 1919 was Bee-culture in coöperation with the United States Bureau of Entomology.

The specialist in charge reports growing interest in the work and estimates that if the 100,000 colonies of bees now in old fashioned gums can be transferred to modern hives, it will mean a saving to Georgia of at least \$400,000.

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annually destroy immense quantities of stored grain. Through county agents, the farmers have been encouraged to build new air tight cribs or re-model their old ones so that grain could be fumigated against corn-weevil. Formerly 20 per cent loss in the crop has been incurred owing to incorrect building of storage houses.

The work in Plant Pathology was greatly extended as a result of the War Emergency Fund. Following a survey, Plant Pathology specialists conducted special demonstrations in the eradication of plant diseases in 44 counties in the State. The principal diseases receiving attention were those of the Irish potato, tomato, sweet potato and cotton. Tomato and sweet potato demonstrations constitute the majority of the work done by the specialists. In addition to this special work, coöperation was maintained with the Office of Cereal Investigations in the eradication of smut in small grains. A number of specialists conducted demonstrations in 25 counties in the State in seed treatment in oats and wheat. Demonstrations were also held at agricultural fairs in which grain was treated daily by the specialists in the presence of numbers of observing farmers.

The work of the Extension Specialist in Forestry has been devoted largely to war activities in close coöperation with the Fuel Administration. In this work, farmers were lead to realize that the production of cord wood was a patriotic service and many municipal wood-yards were started in various cities which furnished an outlet for the farmer's wood.

Another line of work taken up was that in connection with the preservation of black locust and other fence post material. The creosote treatment of old field pines for fence posts has received considerable attention and promises to be one of the leading projects of Forestry Extension Work.

A new phase of work taken up by the Agronomy Division is that of permanent pasture building in south Georgia and tobacco culture in the tobacco district.

In permanent pasture building, demonstrations have been conducted using various mixtures of Rhodes Grass, Carpet Grass, Dallas Grass, Orchard Grass, Red Top, Tall Oat Grass, Meadow Fescue, Lespedeza, White Clover and Alsike on highland, medium and lowland.

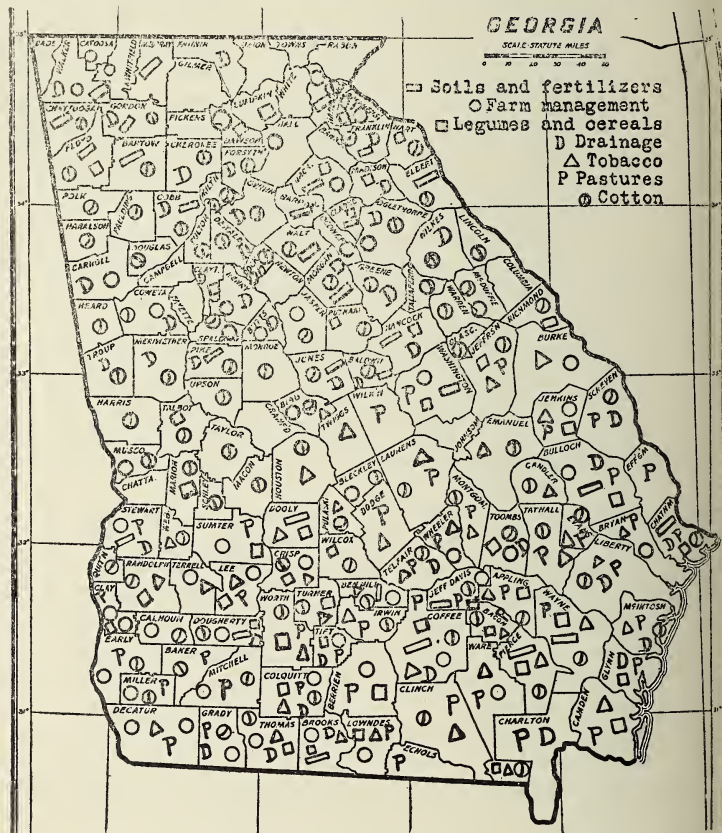
The tobacco specialist has conducted demonstrations in tobacco in 30 counties. The work includes, construction of tobacco barns and seed beds, methods of curing, transplanting, cultivation and diseases of tobacco. Flue tobacco is being grown this year in 50 counties of the coastal plain section of approximately 30,000 acres. The three tobacco markets of last year will be increased to twelve this year.

Twelve demonstrations in the work of poisoning the cotton boll weevil have been conducted and a great number of variety test plats arranged. Three demonstrations in fertilizing cotton have been



conducted. Cooperation is maintained with the Farm Management Bureau of the United States Department of Agriculture and many special farm management demonstrations have been promoted. Farm Management surveys are now being conducted in several counties within the State.

### Coöperative Work in Agronomy and Farm Management



This map shows the extension work of one project. The College carries on cooperative work in eighteen other projects with the United States Department of Agriculture.

The drainage work is on a much better basis than heretofore in that we are meeting out contract with the Office of Good Roads by having a man who can devote himself to this work. There is a constant demand for some phase of this work. During the past year drainage by open ditch, by tile, levy and pumping and construction of levees has constituted the work of the men interested. During the next year with the experience that the specialist has gained we will be in a much better position to meet the demands



Considerable call has been made this year for assistance in terracing the fields. Most of these appeals are coming through the county agents.

Through the District and county agents one hundred farm records in thirty-three counties in the state were taken by the specialist in farm management. In addition to this he has spent some time studying the conditions in Walker and Sumter counties preparatory to getting some data in shape to be sent to farmers of these districts.

A discussion of the educational value of county agents' work might well start with the boys and girls of the rural communities, a majority of whom have received much benefit through the club work and otherwise from the county agent. Furthermore, the interest and enthusiasm aroused not only among boys and girls but the whole community including parents, teachers, business men, farmers, bankers and all others would seem to place this phase of the work first.

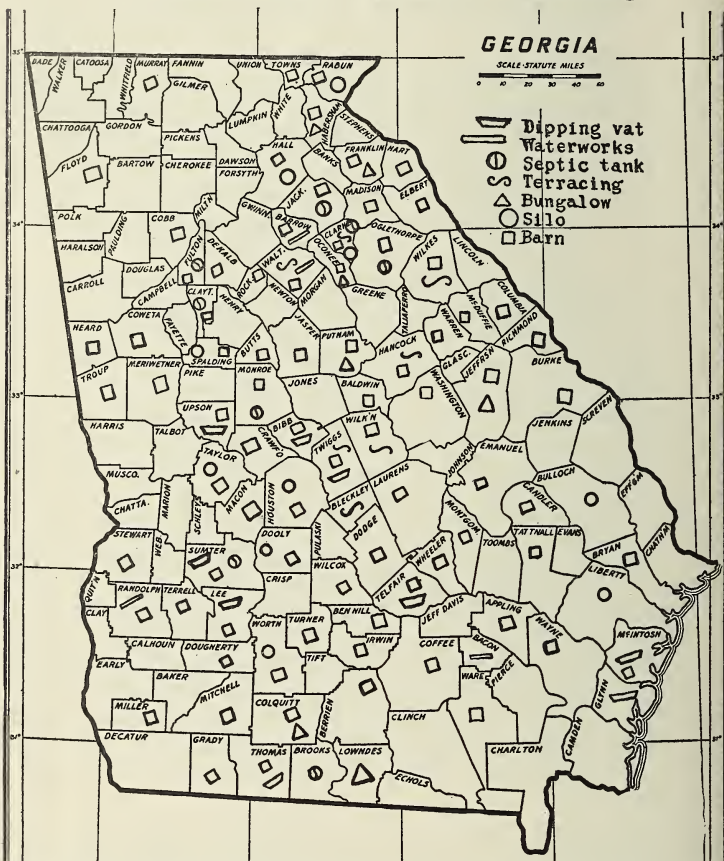
The schools values of club work have been such that the clubs now constitute one of the main activities of the progressive rural school, and the wide awake teacher has already coupled with the subject matter in agriculture and home economics, regular topics in geography, history, mathematics, penmanship, reading and language.

The general purposes of of the club work is set forth in the following review: To encourage and train the county youth along the lines of the activities of county life; to acquire more education and put into practice the facts of scientific agriculture and home economics; to bring the school life of the pupil into closer relationship to his home life, to assist in development of a spirit of closer coöperation in his family and community; to magnify and popularize the vocation of the farmer and home maker; to enlarge the vision of the country youth, give him a definite purpose and develop leadership; to furnish to the rural teacher an opportunity to vitalize the school work by correlating the teaching with the actual practices on the farm and in the home. Club work opens up visions of other things, other places, other institutions, other people. Club work develops the agricultural assets of the community and trains for citizenship.

Coöperative club work has been carried on in the state with a number of agencies, which have encouraged the boys and girls to such an extent as to have aided materially in its success. Had it not been for the hearty financial support and moral support given by state and county school officials, county commissioners, boards of trade, chambers of commerce, farmers' organizations, womens' clubs, bankers and other public spirited citizens the club never could have achieved the great success that they have. It is impossible to name the thousands of individuals who have aided us in carrying forward our work and who have without due recognition rendered meritorious service to the institution and to the state.

The pig club work carried on in coöperation with the Bureau of Animal Industry of the United States Department of Agriculture has continued its successful work. Pig clubs organized in the state in 1914 with an enrollment of 977. Enrollment now numbers 9,020 with promise of still greater increase this year. There were 8,678 members in the Pig Clubs in 1918.

### Coöperative Work in Agricultural Engineering



The legend above shows the distribution of the work in agricultural engineering and the location of the different projects.

During the past year 2,730 square miles of territory in Georgia have been surveyed and mapped. The reports of the chemical analyses of the soils of Jasper and Terrell counties have been issued, and Crisp and Turner counties are in the hands of the printer and will be out in the early fall. The analytical work on Madison county is about completed.

The nine counties that have been worked since the last report

brings the total number of areas surveyed to sixty-four, comprising 25,291 square miles, or 16,186,240 acres. Up to the present the soils of fifteen counties have been analyzed.

Two new features of beef cattle work during the past year are worthy of special mention. First, there was a plan worked out in coöperation with the agricultural department of the Central of Georgia Railway by which twenty-four registered Shorthorn bulls were placed on farms through the state. Second, a purebred sire campaign was held during the winter and spring months.

The loan of bulls by the Central of Georgia Railway to farmers was confined to counties having county agents. The preference was given to farmers who were members of the regularly organized Georgia Livestock Association and who are coöperating with the College in the establishment of permanent pastures. The bulls were used by farmers of a community where located.

The purpose of the purebred sire campaign was to encourage the use of purebred registered sires of outstanding merit and to discontinue or dispose of the scrub and grade sires. Work was conducted in two counties in each Congressional District by the animal husbandry field agents, county agents and representatives of the railroad agricultural department.

In this campaign one thousand farmers pledged themselves to use purebred sires and to encourage the use of them in their communities. Twelve purebred bulls and twenty-five purebred boars were placed by the agents in this campaign. Four livestock associations were organized and three hundred purebred breeding cattle have been brought into the state during the winter. Many purebred and grade calves have been distributed to calf club members.

Demonstrations in the swine industry have given a great impetus to hog raising in the state of Georgia. The coöperative hog sales have also stimulated this movement and farmers have been greatly encouraged by the increased prices received over selling in the old way. Since January, 1919, a sheep specialist was employed in coöperation with the United States Department of Agriculture and much interest manifested in the state in reviving the sheep industry. The greatest need is legislation against the worthless cur which is now being agitated throughout the state. Many areas of cut-over lands are admirably suited to sheep farming.

Dairy extension work was seriously hampered during the last year due to the fact that our dairy specialists were in the Army. One of these men has returned to his former position and has been active for the last few months in the purebred dairy sire campaign, in organizing bull associations and cow-testing associations, and in the placing of high grade dairy cattle. Thirty-seven purebred dairy bulls, twenty-five purebred cows, one hundred and forty-five grade cows, and two hundred and seven high class heifers have been placed by the dairy specialist.



A most notable achievement has been the cheese factory work. The first factory in the state was established at Young Harris in the spring of 1918 and operated during the grazing season. Operations began again April, 1919, with greatly increased monthly output over any month in 1918. The farmers in this mountain section have purchased carloads of high grade Holstein cattle and registered bulls. Two other cheese factories are now being organized and will be in operation during the summer months. It is predicted that within a few years cheese factories will dot the mountain sections of Georgia.

### Marketing

Marketing is but a sample of ten extension project agreements which we have with the various bureaus in Washington, this special project being carried on in coöperation with the U. S. Bureau of Markets.

In possibly no other crop has there been quite so great a loss as sweet potatoes. To remedy this the extension agent in marketing taught the farmers through the press, extension meetings and at fairs how to grade and to market their sweet potatoes.

Four specialists were employed in a potato storage house campaign and more than one million bushels of sweet potatoes were stored in houses constructed under their direction. One of the specialists with the coöperation of the county agents in his territory was successful in having forty-three storage houses built with a minimum capacity of 300,000 bushels. Another specialist made the record of directing the planning and the building of one potato storage house each day he was in the field. He was only able to do this through the coöperation of the county agents.

Last summer a daily news service giving market conditions and movement of fruit was furnished to all cantaloup, peach and melon growers and dealers in the state who wished the service.

It has been found that often a farmer has a product to sell which may find a market in an adjoining county. Also a farmer may need seed which could be secured, if he only knew, from a nearby farmer. Last fall there was a serious shortage of small grain seed and other seed as well. A questionnaire was sent out to the county agents concerning the sources of seed for small grain, corn, cotton, cowpeas, velvet beans, sorghum, cane, potatoes, sweet potatoes and other crops of minor importance. This information was tabulated and then returned to the county agents and with the aid of this data in hand they were able to find all the seed the farmers of Georgia needed right at home. It was a service to the men who wished seed to plant and those who had a surplus for market.

Exhibits were made at the principal state fairs, also county fairs and at extension schools in the best methods of assembling, grading and packing the various farm products which the Georgia farmers



were called upon to prepare for market. The exhibits attracted a great deal of attention wherever they were shown.

The production of peanuts has grown from a million and a quarter bushels to over ten million bushels in the last two years. In order to aid both the buyers and sellers of peanuts a complete list of all dealers trading in peanuts was secured and sent broadcast over the state. A complete list of feed mills and warehouses was also compiled through the district agents, and farmers were instructed in the best methods of picking, grading and marketing their products. In this way a great service has been rendered to one of Georgia's newest industries.

The extension agent of the College initiated coöperative marketing of hogs and cattle in Georgia. These sales have been the means of teaching our farmers the importance of feeding out the hogs and preparing them for market in order that they may receive the advantage which comes by selling the best type of products. Coöperative hog sales have been the means of selling several thousand hogs in all sections of south Georgia this year with a saving to the farmers of a great deal of money, in as much as the hogs brought more money in practically every sale than the local buyers had been able to offer. With the aid of the county agents the market men have been successful in having a complete system of grading pens built at the principal shipping points for hogs in the southern part of the state. A representative of the College is always present at these sales and aids in the assembling, grading and loading of the hogs for shipment. More than fifty coöperative hog sales have been held this winter.

### Division of Agricultural Chemistry

The Division has had under instruction a greater number of students during the past year than ever before.

In spite of abnormal conditions, the class work has been good. Good progress has been made in the soil survey work, the War Department having made a request for the survey of quite an extensive area in the state. We were thus able to secure more aid than usual from the Bureau of Soils. The following counties have been surveyed:

Madison	-----	278 square miles
Greene	-----	400 square miles
Oconee	-----	184 square miles
Morgan	-----	346 square miles
Putnam	-----	348 square miles
Henry	-----	337 square miles
Butts	-----	179 square miles
Fayette	-----	215 square miles
Coweta	-----	443 square miles
Total	-----	2730 square miles

Owing to war conditions no reports of physical surveys have been issued by the U. S. Bureau of Soils during the present year.

The reports of the chemical analyses of the soils of Jasper and Terrell counties have been issued, and Crisp and Turner counties are in the hands of the printer and will be out in the early fall. The analytical work on Madison county is about completed.

The absence in the Army of one of the chemists and the frequent interruptions for emergency work growing out of war conditions have greatly impeded the progress of the analytical work for the past year. However, satisfactory progress is now being made, and, after June 1, the laboratory will be running on a normal basis.

At the request of the War Department, Professor Lowry was sent to Fort Benning for about a month to assist in the appraisal of farm lands condemned and taken over by the government for war purposes. His expert knowledge of soils greatly assisted the appraisers in determining the relative value of the lands taken over.

The nine counties that have been worked since the last report bring the total number of areas surveyed to sixty-four comprising 25,291 square miles, or 16,186,240 acres. Up to the present the soils of fifteen counties have been analyzed.

As the analytical work progresses, many striking differences in soils are revealed. Comparing the chemical composition of many soils with fertilizer tests in the field stresses the imperative need of extended chemical research along the lines of soil fertility. The full value of the soil survey and chemical analysis cannot be realized without exhaustive chemical studies that go beyond the mere chemical analysis of the soil. I would strongly urge the need of additional laboratory facilities and the assignment of a chemist for research study of some of the many problems that suggest themselves from the data obtained in the soil survey. Only by chemical studies that go further than merely the determination of the total plant food present in the soil can we hope to correlate the chemical composition of the soil with field tests and farm practice. Chemical analysis should be followed by investigations that will aid in the interpretation and application of the data being acquired in the soil survey and analysis.

The Division, at the request of the Food Administration, made analyses of samples of cotton seed from all the cotton growing counties in the state for the purpose of securing data to show that the prices, which the producers of Georgia asked the Food Administration to fix, were fair and could be maintained.

The soil survey work has been carried on during the past winter under a new system. The United States Bureau of Soils has placed men in eight counties in Georgia under the supervision of Mr. Long, in charge of the field extension work for the College. Under this arrangement, it is possible to keep the classification of soils uniform. As Mr. Long has worked with all of the men in these

areas, considerably more work has been accomplished than usual. Some of the men were new to the soils of this section, but with Mr. Long's aid, they were able to keep the work going without interruption. Several of these areas were adjacent, and the soils being similar, it is planned to make one report cover two areas. Mr. Long will write all of these reports, thus enabling the field men to devote all of their time to mapping the soils. In this way, they were able to complete the areas before being taken out of the state. The United States Bureau of Soils is well pleased with the survey work done in Georgia this year, and it will be extended to other states along the lines initiated in Georgia.

### Division of Agricultural Education

Interest in agriculture and home economics and the progressive spirit of the secondary schools of our state may be measured by the response which is being made to the Smith-Hughes Act. Already thirty-two schools have qualified in the matter of off-setting Federal money and providing the necessary equipment, and as many more schools are preparing to meet the requirement for such work. It seems that through this act secondary agriculture in the state will be standardized and the schools brought to a higher plane of efficiency and service in agriculture and home economics.

The Division of Agricultural Education has charge of training and placing the teachers in these schools. During the past year this task has been a particularly difficult one, because of the rapid growth these schools have made and because of the lack of men to take up the work. The division has attempted to solve this problem by working along two definite lines. An attempt was made to increase the supply of teachers through emergency training courses, and by training teachers through service courses after they had entered upon their work in the schools.

A three months emergency course was given last summer ending August 24th. Twenty new men of mature age with teaching experience and science training attended this course. It was not thought that these men would prove equal to our agricultural college graduates, but, with continued assistance through the year, they have rendered a valuable service to the state. This group of men will return to the Agricultural College for work during the summer school each year.

With the rapid growth of the teaching of agriculture in our high schools, the demand for strong teachers in this field continues to increase. At least twenty new teachers will be needed in this work between June and September. Special summer school courses have been arranged for the coming summer to meet this demand for teachers.

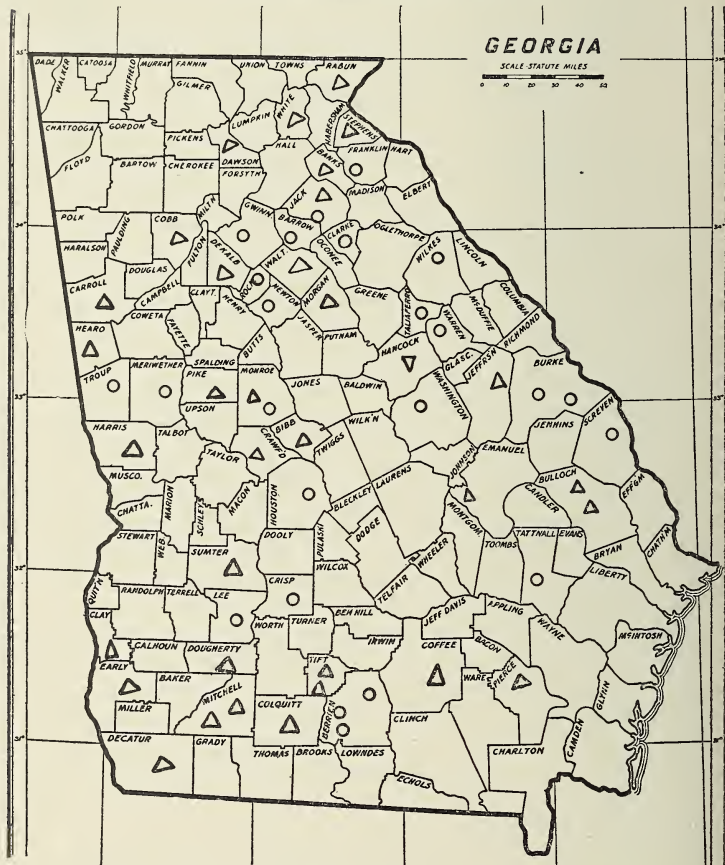
The division organized and administered training courses for all teachers in the state who were teaching secondary vocational



agriculture. This work will culminate in a conference of all of the teachers at the close of the summer school session this year. Over forty teachers will participate in the conference. This work has proven very effective, and it seems advisable to continue it as a permanent policy in the training of agricultural teachers.

This work with the teachers in service has brought the division in very close touch with secondary schools in every part of the

### Vocational Agricultural Schools



The triangles show the vocational schools which have been established, 33. The circles represent communities asking for schools, 26.

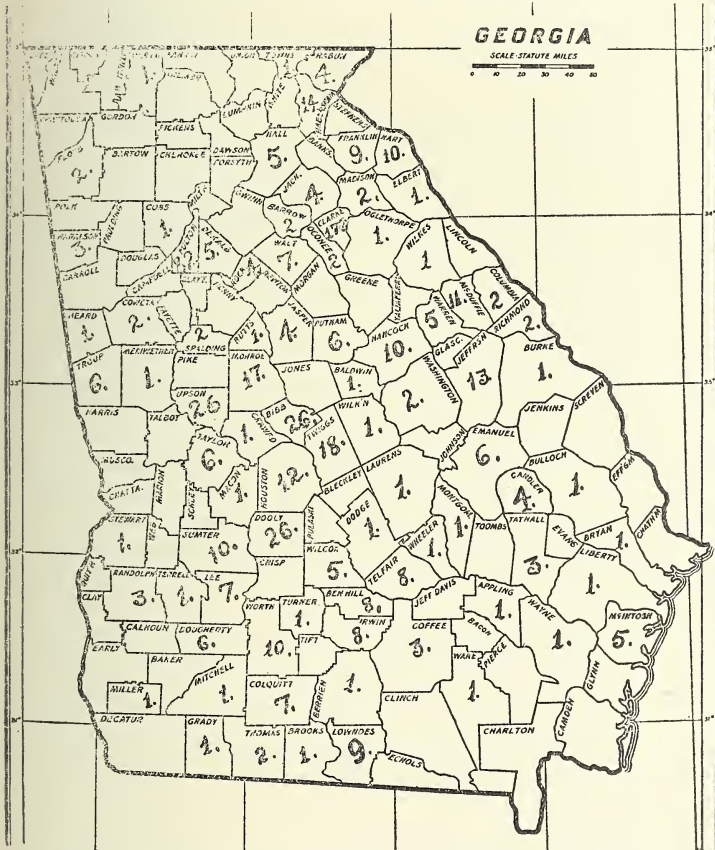
state. An understanding of actual school conditions has been gained in this way that could have been obtained in no other manner. This information will prove a great assistance in developing the teacher-training work in general.



## Division of Agricultural Engineering

With the addition of equipment to take care of the courses in blacksmithing, carpentry, auto truck repairing, truck driving and pipe fitting, which were given last year at the request of the War Department, the Division of Agricultural Engineering finds itself in better position to handle farm engineering problems than ever before. Student instruction has profited greatly by the increase in equipment.

## Improvement of Farm Buildings



The figures in the different counties show the number of plans for farm buildings sent out by the Division of Agricultural Engineering.

Under the supervision of the head of this division the animal husbandry building has been hulled in and the new dormitory for women is now under construction. Plans and specifications for other buildings have been prepared by the division to meet the needs of the college in the future .

A tractor course lasting five weeks was given last summer. It will be continued this summer and enlarged to meet changing conditions. Hundreds of tractors are being bought over the state and unless men are trained to properly operate and take care of them, a great amount of money and time will be lost. Too much attention cannot be given to the designs, operation and upkeep of labor saving machinery, the demand for which has been steadily growing on account of a shortage of labor of approximately 200,000 men.

So many demands are being made for extension work in agricultural engineering that the division finds itself unable to properly meet them with the services of only one field man. During the year twenty-six designs were drawn and traced, and 850 blue prints and designs were sent out to farmers. Ten terracing demonstrations were given in different parts of the state, thirty-five farmers were aided in the erection of buildings and six in the installation of water-works systems. Approximately one hundred farm buildings were improved and many farmers helped along this line in a series of twelve meetings which were held with an estimated attendance of 3,200.

#### Division of Agronomy

The Division of Agronomy has been handicapped during the past year by the continual change in the personnel, six new men having been appointed during the year and five having left the division. The five men who were in military service from this division have returned and taken up their work.

Our work during the last year in cereal production, has been the best since this work was taken up in coöperation with the Office of Cereal Investigation, and results of the selection work are just beginning to show. The following comparison between original strain and the selection of two varieties show decided improvement.

Fulcaster, 500-2 (pedigreed selection)_____	64.59 bu.
Fulcaster, original strain _____	47.91 bu.
Increase_____	16.68 bu.
Georgia Red, 650-32 (pedigreed selection)_____	54.16 bu.
Georgia Red, original strain_____	41.66 bu.
Increase_____	12.50 bu.

The analysis of cottonseed, peanuts and soy beans has been continued, and the work of this year corroborates the data already secured. Three hundred and thirteen samples of cottonseed have been analyzed, thirty-one samples of peanuts and twenty samples of soy beans.

Arrangements are being made this year with the fair associations for exhibition of pedigreed seed. Heretofore, the only re-

quirements have been that the seeds be registered and true to type. A number of breeders in the state are putting out pedigreed strains at this time and the fairs were asked to award ribbons for pedigreed seeds to encourage this work.

Meade cotton is continuing to attract attention in the Sea Island district, not only by growers but also by millmen. This is a most promising line of work for the College and needs especial attention during the present summer. Twenty-three bales of Meade cotton sold recently in Savannah for 50 cents a pound.

Several demonstrations in the use of poison in the control of the boll weevil will be made during the present season so the farmers in the various communities can become familiar with this method of combatting this pest.

It has been possible to meet the Office of Good Roads and Road Engineering this year for the first time in full coöperation. It will be possible in the future to take care of requests much more promptly than in the past.

The increased interest in tobacco as a substitute for cotton in the boll weevil infected areas of the Coastal Plains, has made it necessary to have a man devote his entire time to this work. Last year approximately 6,000 acres were produced in the Coastal Plain and it seems that there will be approximately 30,000 acres this year. The coöperation of one of two offices of the Federal Department of Agriculture have been enlisted in working out some of the problems connected with this crop.

Grass demonstrations have been established in the Coastal Plains region during the year. This work is in coöperation with the Georgia Land Owners' Association and covers the principal soil series of the Coastal Plains region. Swift and Company furnished \$1,000.00 to help carry on this work. The Office of Forage Crop Investigation also coöperated by furnishing a considerable quality of seed.

Work is being planned to harvest carpet grass seed in this state this year. This is one of the most promising grasses in the Coastal Plains region and last year there was not a pound of this seed available. It will be necessary not only to work out methods of harvesting but methods of handling so that the percentage of germination will be considerably higher than it is at the present time.

Some records were taken five years ago in farm management in Sumter County. Today more than five hundred farms are being resurveyed there to determine what changes have been brought about by the boll weevil in the organization of the farm work. Records have also been taken in Walker County.

An investigation in the cost of producing peanuts has been made since our last report and we hope at an early date to put this information in the hands of all peanut growers.



### Division of Animal Husbandry

At the present time one of the most vital problems confronting live stock farmers of the state is the question of soft and oily pork. It has been recognized that peanuts, soy beans and other oil producing grains will produce pork of a rather inferior quality. In former years when the entire amount of hogs produced in Georgia was consumed within the state, this did not constitute a very serious problem. At that time the differential between the price of hard hogs and soft hogs was negligible, and in no case did it exceed \$1.00 per hundred pounds. With the great progress that has been made in the development of the swine industry in the state, Georgia is now selling hogs in the open market.

During the past season there was frequently a differential of \$5.00 per hundred pounds in the selling price of soft and hard hogs. With this discrimination in the market, it is essential that the problem be investigated so as to ascertain the amount of amendment that will be necessary in the ration in order to produce hard hogs. With this in view the College has undertaken investigation work with some of the packing houses within the state. It is hoped to find out the exact difference in the value of soft and hard hogs to both the producer and the buyer.

It is proposed to undertake extensive feeding tests on typical farms in the southern part of the state where peanuts are being produced in the greatest quantities so as to study the problem carefully from the production standpoint.

At the present time the College has in progress a valuable demonstration in the finishing out of hogs for the market. Four lots of five animals each have been selected. Group 1 is receiving hominy feed alone in the pen. Group 2 is receiving hominy feed and tankage in the dry pen. Group 3 is receiving hominy feed on alfalfa pasturage. Group 4 is being fed hominy feed and tankage on alfalfa pasturage. This experiment will not be completed until the middle of June.

Records are being kept on the dairy herd, and a mass of valuable data is being accumulated dealing with the cost of production of dairy products. For a number of years desirable bulls have been used in the herd. As the heifers come in milk, the average production from the herd is constantly being increased.

The division is supervising at the registry testing for the different breed associations within the state and records are being made that show conclusively that cattle of as high producing qualities can be raised in Georgia as in any other section of the United States.

During the year the extension force was busily engaged in stimulating an increase in the production of live stock products. The government asked Georgia to make an increase of 10 per cent in the number of hogs. It is gratifying to note that Georgia met this request. Every county in the state showed an increase, with



the exception of Spalding. This county showed a decrease of 3.9 per cent in the number of hogs for the year. Other counties showed increases varying from a little over 2 per cent up to approximately 20 per cent. More than 60 counties showed an increase of above 10 per cent. It is gratifying to note that approximately one-half of these counties showing more than 10 per cent increase were located in north Georgia. The state as a whole increased approximately 10 per cent.

### Division of Forestry

The closest coöperation was had with the Government in its war activities during the year 1918. The head of this division acted as secretary of the Wood Fuel Department of the State Fuel Administration, and the extension forester visited many sections of the state in an effort to create sentiment in the substitution of wood fuel for coal. The division was instrumental in the organization of eight municipal woodyards, thus creating a market for the farmers' product. An effort was made to standardize wood fuel prices, basing prices on fuel values.

Under the direction of the United States Forest Service, and at the request of the War Department, state surveys were undertaken with the purpose of determining the location and amount of standing black walnut and mulberry timber. Had the war continued a few months longer there would have been located in Georgia a manufacturing plant for aeroplane propeller blades from walnut as a result of this service.

With the organization of the Students Army Training Corps there was approved by the War Department the inauguration in this institution of a two-year technical course in forest engineering. At the time the armistice was signed there were eight men enrolled in this course and applications from 10 others were receiving consideration. Ours was the only institution offering such a course in the United States at that time.

The extension workers reached 2,500 farmers in the Wood Fuel and Post Treatment campaigns and established 25 projects, representing some 12 counties. It is understood, of course, that forestry projects must run over a period of years if the demonstrations are to prove of value. For this reason considerable care must be taken in the selection and location of projects. It is planned to provide in each extension district for a project covering each branch of forestry; namely, management of woodlands, thinning and improvement cutting, estimating and measuring trees and logs, marketing forest products, grazing as an adjunct to forestry, the turpentine of second growth stands, the treatment of farm timbers to prolong life, the use and care of the small portable mill, the establishment of plantations and woodlots on steep slopes and abandoned fields to prevent erosion, the destructive effects of sur-

face fires and annual burning, the planting and care of roadside and street trees, and the establishment of school nurseries.

It is planned to make a forest and woodland survey of Georgia. At the present time fifty per cent of the forest area of the state is in the farm woodland. In another ten years most of the large mills will have completed the logging of their holdings and will have disposed of the cut-over lands. By that time the farm woodland will constitute seventy-five per cent or eighty per cent of the wooded area of the state. In other words, the annual production of wood in the south is on the decrease and we shall be dependent to an ever growing extent upon the West for supplies of wood. But, in time, even the Western supply will be depleted. If, in the meantime, farm woodland forestry is not given the encouragement and assistance it demands, our lot will be pitiful indeed. Our choice lies between two extremes—either private management of farm woodlands under state regulation and stimulation, or Governmental control and supervision of all lands not adapted to or not needed for agriculture.

During the past years considerable plant material has accumulated in the nursery and an effort is being made to place the project on a self sustaining basis.

The fence post treating plant has been in operation several times during the year in connection with class work. During the coming year the plant will be used by the extension forester for demonstration purposes at the state fairs and extension schools. The tarred post demonstration on the College farm provides interesting data. Sap pine posts were cut, peeled, and treated in 1915. They have now been in the ground for four years. Ninety per cent of them are still as sound as when set and the others are still good for a year or two. Failure was due, not to the tar treatment, but to the fact that the pine posts were not thoroughly peeled before treatment. Untreated sap pine posts in the same experiment rotted out in seven to nine months while sawn heart-pine posts were rotted through in less than three years.

#### Division of Home Economics

Simultaneously with the opening of the College of Agriculture to women at the beginning of the session of 1918-19 the Division of Home Economics was organized. Well equipped laboratories for work in foods and nutrition and in textiles and clothing, together with a cafeteria which is thoroughly equipped with all modern conveniences were made available. Courses of study leading to the B.S. degree in home economics were offered. These courses are designed to give women thorough technical training in all the arts of home making and to equip them professionally for positions as teachers of home economics in vocational high schools and managers of institutional home economics. Teacher training courses in vocational home economics, which have been approved

by the State and Federal Boards for Vocational Education, have been established. Other divisions provide special courses in agriculture to meet the needs of county home demonstration agents. These technical courses together with the required sciences and electives, constitute a liberal education with a basis of broad culture.

At present only the junior and senior classes are open to women. This requires for entrance graduation from an accredited high school together with the first two years of standard college work. During the past year there have been registered twenty-four young women in the long courses. These women are graduates of state normal schools and other junior colleges and seven of them have already studied in universities outside of Georgia.

In order to meet the needs of women who wish advanced college work, but who cannot take an entire year for study, there have been established the three months winter short course in which college credit work is offered. During the past year ninety-five women registered for these courses. The home economics work of the University Summer School has also been standardized so as to offer a variety of credit courses which count toward the degree. All of this development comes in answer to the urgent demand of women who have heretofore had to go outside of the state to secure advantages in higher education.

The most tangible evidence of the development of all this work is found in the erection of a residence hall for women. This handsome building, modern in every detail, with well equipped gymnasium, swimming pool, parlors, and rooms for sixty women will be completed by the fall of 1919. This building will also provide for the present certain laboratories and lecture rooms to be used by the home economics division. Overlooking a beautiful part of the campus and provided with every modern convenience for comfortable and dignified living, this residence hall insures opportunity for the women of Georgia to establish fine social ideals and beautiful traditions of living for women in the University both now and in the future.

### **Division of Horticulture**

The work of the Horticultural Division has grown and expanded during the past year, even though the division has been handicapped by many changes of personnel due to the conditions of the war. Some of its staff are still in service and one of them is yet in France.

The orchards of this division were set ten years ago in very poor land. By constant effort they have been brought into successful bearing. It is planned, however, to remove these old orchards and increase the fertility of the land as soon as it is practicable to bring into bearing other plants.

The greenhouses have had a very successful season. They have been run, however, to capacity and no greater output can be ex-



pected from them in future years. In fact, every inch of space has been utilized, even that under the benches. Under present conditions it is impossible to take care of the classes needing instruction in greenhouse construction and management as well as the classes in plant propagation. It is to be hoped that some means may be found by which the present range can be increased in size so that room may be had for enlarging the present collection of plants and improving the facilities for instruction.

The fertilization experiments the division has been conducting on apples and tomatoes for the past six years are still under way and it is hoped that some excellent results will be obtained within the next year or two. The second year of the Satsuma orange fertilization tests has been past. It is too early to make reports. Extensive fertilizer plats were started with peaches this spring in Habersham County. The tests on varieties of pecans adapted to north Georgia have been continued and extended. In the counties of Habersham, Clayton, DeKalb, Hall and Walker there are now growing pecan trees, some varieties of which it is hoped will prove their adaptability for north Georgia conditions.

The pomological extension work during this past year has been greatly increased in its effectiveness. Through a new system of management the home orchards under observation have increased 150 per cent. Thirty-two counties are receiving special attention in orchard and Irish potato clubs. There were 229 orchard club members last year and 48 spray outfits were introduced into the state through the extension activities. Something over two million trees of various kinds are under observation and it is expected that the six Irish potato clubs of the past year will be expanded this summer into 40 or more. At the present time 300 bushels of Irish potato seed have been located for dissemination to the members of these clubs.

In January bee industry work was inaugurated. Visits have been made and clubs started in 20 counties; 2,236 colonies have been examined. There are 130,000 hives of bees in Georgia. If these colonies could be transferred to modern hives, they would be increased over 100 per cent in efficiency and more than one half million dollars would be added to Georgia's income.

Another important line of work within the state has been the control of insects in stored grain products. It is estimated that Georgia suffers 20 per cent injury yearly to the corn crop through the grain weevils. Could this injury be reduced or eliminated, it would be a great saving to the state. Demonstration cribs have been arranged for at the district agricultural schools, and at the present time there are 31 farmers in the state who have expressed their willingness to so arrange their cribs as to permit fumigation this fall.

The past year's work in landscape gardening is bearing fruit this



season. Twenty-seven counties have availed themselves of the facilities offered by the department for the improvement of homes and public buildings. The division has worked with 53 plans for public schools, courthouses in small towns, parks and individual residences. It is most gratifying to see how the farmers of Georgia are availing themselves of the privileges offered along these lines.

### Division of Plant Pathology

Under a project agreement with the Office of Cotton, Truck and Forage Crop Diseases, a specialist was detailed to Georgia as Extension Pathologist. During the ten months he continued in the state the Extension Pathologist visited 55 counties, addressed 3,055 persons in meetings and arranged special demonstrations in 33 counties, 17 of which were under project agreement. The projects were distributed as follows: Irish potato 3, cotton 3, tomato 20, and sweet potato 18. The demonstrations of Norton wilt-resistant tomato resulted in the following data:

Amount of wilt in Norton plantings—minimum 0, maximum 5 per cent.

Amount of wilt in other varieties—minimum 20 per cent, maximum 100 per cent.

A sweet potato demonstration in Thomas County yielded the following interesting data:

Selected slips from treated seed potatoes yielded 91 per cent stand in the field.

Unselected slips (commercial) found on the market yielded 31 per cent stand in the field.

Under a project with the Office of Plant Disease Survey, the head of this division has been appointed chief Collaborator for Georgia. From the memberships of the Extension Force, the Horticultural Society and similar organizations a reporting force of nearly 500 has been built up. During the season of 1918 over 3,000 reports were received, many of the reports being accompanied by specimens which required some laboratory work in identification. At various times field men from the Washington Offices were detailed to the State to assist in special surveys. No less than 500 individual reports were made on the diseases of wheat and oats. As a result of the Plant Disease Survey for 1918 it was determined that the crop reduction in Georgia due to disease amount to more than \$100,000,000. Smut reduced the oat crop more than \$1,250,000 and other losses were even more marked.

The plant disease survey will be continued during the present season and the indications are that the crop losses for 1919 will greatly exceed those for 1918.

In the laboratory special studies have been made of many of the lesser known diseases, such as Peach Die Back, Plum Wilt, etc. Under the direction of the division wilt resistant tomato seed has

been sent to all persons desiring a trial. Already the introduction of wilt resistant strains has resulted in the production of tomatoes in many sections where none had been grown for years. At present the division is considering the cabbage yellows problem and an endeavor will be made to adapt some resistant strain to our conditions. A special investigation is being made of the Physoderma of corn to determine a practicable method of control.

Under present conditions it is impossible to devote the time to research problems which such studies demand. The entire time of one specialist might well be devoted to investigation. The development of the wilt-resistant tomato is worth not less than \$1,000,000 to the tomato industry of the country.

### **Division of Veterinary Medicine**

During the past year the production of hog cholera serum was 926,755 mls. The quantity distributed was sufficient for the treatment of approximately fifty thousand hogs. On account of high prices of everything used in connection with serum production a raise of price of serum from 1 cent per mil to 1.25 cent per mil was made in August, 1918. This price is lower than at which most commercial serum is sold to swine owners in this state.

As we have no funds for the maintenance of the serum plant, except the receipts from the sales of serum and pork, it has not been practicable for us to conduct experimental work along the line of swine diseases and parasitic infestations. As matters stand the serum plant is almost entirely a commercial proposition in direct competition with companies and corporations having hundreds of thousands of dollars capital.

There is an important line of work that should be undertaken by this division which consists in making exhaustive tests of the virtues of the many proprietary preparations marketed in the state under the guise of remedies, preventives and cures of livestock diseases and parasitic troubles. It is a well known fact that many of these preparations are of little or no value for the purpose for which they are advertised and that many livestock owners have suffered disappointment and serious financial losses through their use. A small appropriation would enable us to conduct the needed experiments and tests along this line and would enable us to furnish reliable information to livestock owners concerning such preparations.

Increased interest has been shown in the Veterinary Degree Course during the past year. In spite of war conditions and the formation of the Student Army Training Corps we have a larger number of veterinary students than we had last year. The prospects for a large Freshman class for next year are at present very good as is indicated by the number of inquiries received.

During the last three years the attendance at the various veterinary colleges throughout the United States has decreased to an

alarming extent. So much so that it is quite apparent to anyone acquainted with conditions that the country will in a few years face a serious shortage in veterinarians. Under normal conditions the country has never had a sufficient supply of properly educated veterinarians to look after the control and treatment of animal diseases and to perform the duties of livestock sanitary officials and dairy, milk and meat inspectors. Graduating classes at all the veterinary colleges have been small recently and will be small during the next few years.

Several private veterinary colleges that formerly graduated large classes each year have closed permanently. It is very evident that from this time on the burden of veterinary education must rest upon the shoulders of state institutions such as this. If the South is ever to have a sufficient supply of veterinarians to look after her rapidly growing livestock industries she must educate them. Conditions are such that there is little tendency for veterinarians educated in other sections of the country to seek locations in the South. We must depend upon the young men of the South for our veterinary supply. The deficiency of the veterinary supply of Georgia may be seen in the following comparison.

#### GEORGIA'S LACK OF VETERINARIANS

STATE	Number of farm animals	Value of farm animals	Number of Veterinarians
Indiana - -	7,489,000	\$330,000,000.00	1,500
Georgia - -	4,564,000	200,000,000.00	100

The average veterinarian of Indiana has under his care 4,982 farm animals valued at \$220,000.00, while the average Georgia veterinarian has under his care 45,640 farm animals valued at approximately \$2,000,000.00.

It may be safely stated that at the present time there are fully one hundred localities in the state in which the services of graduate veterinarians are badly needed and in which such men could soon build up lucrative practices. Many calls come to this division from localities desiring that veterinarians locate there in practice but the number of men seeking locations is so small that we are not always prepared to recommend the localities to prospective practitioners.

During the past year a new bulletin on Hog Cholera was prepared and distributed among the swine owners of the state. A number of circular letters on Parasites of Swine and Hygiene and Sanitation on the Farm have been prepared and distributed to the boys of the Pig Clubs.

In the extension work in veterinary medicine 248 farms were visited by the specialists and 122 meetings addressed with a total attendance of 6,189 people. In every case the lectures were accompanied by practical demonstrations and people were shown how to treat 345 individual animals. There were 28 autopsies on



animals for diagnosis. In coöperation with the county agents 20 projects in disease control were carried and these were of inestimatable value to the farming communities in which they were located.

In connection with the instructional work for veterinary and agricultural students clinics were conducted during the year at the Veterinary Hospital. A total of five hundred and three cases were treated, being distributed as follows: 93 horses, 92 mules, 204 cattle, 58 hogs, 55 dogs, and 1 cat.

This number of sick or injured animals were treated for the owners without charge for professional services and constitutes a considerable service to the live stock owners in the vicinity of the College.

In addition to the above service many conferences have been held with farmers at the College at which advice and instruction along the line of prevention or treatment of diseases of animals have been given.

### **College of Science and Engineering**

The time is particularly opportune and the need for thus rounding out the proper facilities which the A. & M. College should afford the young men of the state is particularly pressing that fuller provision be made for the College of Science and Engineering. The demand for engineers is insistent in every corner of this important field of economic development, and especially in the field of road construction specialists. The state is entering upon an era of large expenditure for highways, and it would be a misfortune if, for lack of enlarged facilities, the work of the College of Engineering should not be able to maintain its full share of usefulness to the state. Especially is this true in the light of the long period of effort during which this college has labored effectively to bring about the public awakening which is now taking place.

The specific need is for a commodious and well-equipped engineering building to care for the proper housing of this work, and at the same time relieve the congestion in Moore College of the Schools of Physics and Electrical Engineering. To fill this legitimate demand as it should be will require a building to cost \$20,000 and equipment to cost between \$10,000 and \$15,000.

This recommendation has appeared in my official reports for several years past, and the need is now so insistent in the light of the reconstruction activities which attach to the resumption of development after four years of war that it would be a serious mistake for the state to hold back and defer this obvious means of fostering her own rapid economic development by the efforts of her own trained young men.

And if it should appear that consequent upon the straightened income of the state, this most desirable provision can not be completely met, at least a special appropriation of \$5,000 for enlarging the equipment of the road laboratory to train men for im-



mediate duties in behalf of the road construction now beginning is the very least that should be asked or that the Legislature should freely give to an educational demand that will at once save to the state many times that sum in the service rendered by the men trained more efficiently thereby.

### Department of Illustration

The Department of Illustration has been organized for one year and a half and has grown to be a permanent part of our work. Lantern slides and photographs are tinted, pen and colored work is done on maps and graphs, and pictorial charts are prepared to illustrate lecture material which our men and women agents use in the field. A director and two to three assistants have been regularly employed.

Pictorial and statistical charts have been prepared for the following subjects: Agronomy, animal husbandry, chemistry and soils, drainage, dairying, architecture, farm mechanics, forestry, horticulture, plant pathology, landscape gardening, poultry husbandry, clothing, selection, preparation and conservation of food, veterinary medicine, inspirational topics and club work.

The College of Agriculture was a pioneer in the field of illustration. Our work has attracted attention all over the country and displays of it have been on exhibit at the following places: Library Association, Saratoga Springs, New York; Carnegie Library, Atlanta, Georgia; Teachers' Institute, Madison, Georgia; Southeastern Fair, Atlanta, Georgia; Georgia State Fair, Macon, Georgia; and Red Cross Exhibit, Atlanta, Georgia.

### Editorial Department

That the farmers of Georgia and their families may secure the latest agricultural information that comes as a result of research and experimental work and that this information may be translated into terms that may be easily understood by the lay individual, the publications of the Georgia State College of Agriculture are carefully edited, published and distributed.

The field of agricultural editorial work is bounded only by the demands of the people for printed material. Scientific material is published for teachers and leaders in colleges and experiment stations, semi-scientific material couched in popular terms for the small farmer, and still other material with a scientific basis for club boys and girls. Much remains to be done for the editorial pen has as yet only scratched the surface of the field.

Our editor went into military service in September and served six months. While he was absent his work was taken over by the publications committee of the faculty, which satisfactorily handled the work until his return in the spring.

Our editorial department edits extension bulletins and circulars, develops material and plans outlay for posters, supplies weekly

newspapers of the state with a column of agricultural information each week, and gives out to the daily newspapers human interest stories as they deal with progressive agriculture. The work of the editorial department has expanded to such an extent that in order that it may be kept up to the high standard of efficiency that has been maintained in the past, arrangements are being made looking toward the employment of a permanent assistant editor.

So large has become our organization and so widely distributed over the state that it is felt some means must be taken to keep its members fully informed as to what each one is doing. To weld together a still stronger and a more efficient organization, the Georgia Extension News will be published monthly beginning June 1. When it is firmly established, it is hoped that the publication may be developed into a bi-monthly or even a weekly. The publication will carry stories of the work of club boys and girls, of the county agents, of the extension specialists and division heads of the college, and also stories of the work of the county farm bureaus. It will be free to any one in the state who wishes it.

The giving of timely information is made possible through the use of the newspaper plate service. Three columns of agricultural information written specifically for the man in the field and carrying the latest experimental and research work is sent to weekly newspapers of the state free of charge every three weeks. One column a week is used by the paper and approximately 140 editors in Georgia are now taking advantage of the service. The president of the Georgia Press Association has said that much of the interest manifested today in scientific agriculture is to be attributed to the plate service articles which have been appearing regularly in the columns of the small county weekly newspapers.

Experience in editorial work has shown us that a photograph well suited to the subject may often carry a message that it is almost impossible to transmit to the printed page. To supplement the material which goes into our circulars and bulletins and make attractive these publications so that they will be pleasantly and easily read, a large number of photographs are required. A single publication will often call for a series of photographs made in different sections of the state and at different seasons of the year. A photograph which does not show clearly every detail is a failure for reproduction. Photography is a highly developed art and a great deal of experience is required in making the right kind of photographs. In order that our publications may keep their high standards arrangements are being made to secure the services of an expert photographer.

### Publications

The publications of the Georgia State College of Agriculture are increasing in number every year, and are reaching a larger and larger number of people as the methods of distribution are per-

fect. In order that the bulletins, circulars and other printed material may be in easy reach of all the people bulletin holders of tin neatly lettered are being placed in the lobbies of the banks of the state. This bulletin holder service will be extended to other institutions than banks until all the information which we publish will be in the reach of each and every individual.

The title, the number of copies, the pages per issue and the total number of pages for each publication follows:

TITLE	Edition	Pages per copy	Total No. of pages
Drying and Brining of Fruits and Veg.	15,000	12	180,000
Girls' Club Guide	10,000	16	160,000
Extension Service Report	1,000	64	64,000
Feeds for Dairy Cows	15,000	12	180,000
Wheat and Rye Production	15,000	12	180,000
Diseases of Sweet Potatoes	10,000	8	80,000
Trees—Their Use and Abuse	5,000	20	100,000
Hog Cholera	10,000	20	200,000
The Production of Corn	15,000	16	240,000
Feeding the Child	15,000	16	240,000
How to Make Good Butter	15,000	12	180,000
Georgia Plant Diseases	5,000	56	280,000
Peach Growing in Georgia	15,000	32	480,000
Spray Calendar for Georgia	15,000	12	180,000
Tobacco Culture (Bulletin)	2,500	20	50,000
Girls' Club Guide	10,000	16	160,000
Seed Treatment of Wheat and Oats	5,000	4	20,000
Agricultural Club Guide	10,000	8	80,000
Agricultural Club Guide	15,000	8	120,000
Meade Cotton	10,000	8	80,000
Tobacco Culture (Circular)	2,000	4	8,000
Vegetable Planting Table	15,000	4	60,000
Agricultural Guide	20,000	8	160,000
Boys' Club Work in Georgia	20,000	8	160,000
Reason Why You Should Be a Club Boy in 1919	5,000	8	40,000
Agricultural Club Guide	15,000	8	60,000
Growing Irish Potatoes in Georgia	15,000	4	60,000
Report of District Agricultural Schools	850	42	35,000
Analyses of Soils of Jasper County	1,000	46	46,000
Analyses of Soils of DeKalb County	1,000	29	29,000
Announcement of Georgia State College of Agriculture for Year 1919-1920	3,500	152	523,000
Analyses of Soils of Terrell County	1,000	48	48,000
Winter Short Courses in home making	1,000	4	4,000
Enlist in the Students, Army Train. Corps	3,000	4	12,000
Be Inducted Into the Students' Army Train- ing Corps	5,000	4	20,000
Cotton Variety Tests	10,000	4	40,000
Total	331,850	749	4,539,000

### Posters

TITLE	Copies
Have You a Cow?-----	5,000
Increase the Yield of Wheat and Oats-----	1,000
Raising Scrub Hogs Does Not Pay-----	5,000
What Georgia Club Boys Did in 1919-----	5,000
Has Your County a Calf Club-----	5,000
Kill the Scrub Bull-----	2,500
Build a Potato Curing House-----	5,000
Total -----	28,500

#### Record Books For Boys' and Girls' Clubs

TITLE	Copies
Wheat Club Record Books-----	5,000
Calf Club Record Books-----	4,000
Boys' Pig Club Record Books-----	10,000
Poultry Club Record Books-----	5,000
Total -----	24,000

### Cards

Wheat Pledge Card-----	75,000
Seed Treatment of Wheat-----	10,000
Georgia Pure Bred Sire Club-----	10,000
Treating Fence Posts With Coal Tar-----	10,000
Measures to Prevent Diseases of Sweet Potatoes and Irish Potatoes -----	10,000
Total -----	115,000

### Library

The library is steadily growing to meet the needs of the various departments. As an example, more than 200 reference books have been bought for the young women in home economics. Many vocational books have been purchased and the men returning from military service to civil life find these books of especial interest in as much as they deal with all phases of scientific agriculture, artisan trades, vocations, professions, and handicraft.

According to the accession book, the total number of volumes now in the library is 3,611. Substantial additions have been made to the bulletin list during the year, 2,548 bulletins having been received from colleges, experiment stations, and the United States Department of Agriculture. The library has been very fortunate in obtaining a large number of missing bulletins, and has been able to complete a number of files. One hundred and eight volumes of bulletins are now in the hands of the binder, and will soon be returned to the library for future reference work. Duplicate sets of all bulletins, in unbound form, are kept as complete as possible, for loan service to students and teachers.

Bibliographical material upon the following subjects has been prepared during the year, and is now on file in the library: cheese-cookery; cooking of dried fruits and vegetables; food, a factor in the establishment of lasting paces; food value of milk; food value of peanuts; laundrying; rural school lunches; rural sociology;



sewing; textiles; tobacco. Subject matter for the following debate subjects was sent to those requesting it: Resolved, That immigration to the agricultural sections of the South should be encouraged; Resolved, That the price of food should be controlled after the war; Resolved, That it would be disadvantageous to the South and to the farmer, if the cotton acreage was reduced.

The library is making a great effort to procure a collection of war posters issued during the various conservation campaigns, for subsequent preservation in the College library. Many of these posters have been received, and some of them will be mounted and exhibited in the Reading Room. A collection of clippings of the various activities of the College, as well as clippings upon other valuable reference material is kept on file in the library.

The use of the library by faculty and students is growing rapidly; the resources of the reference department are gradually being strengthened, and an unusual amount of assigned reference work has been done by the students the past year. The most important services of a library cannot be measured by statistics, yet it is interesting to know that more than 2400 books, bulletins, and magazines were taken out for home use; an increase of 2000 over the number loaned during the year 1916-17. In the reading room will be found 150 daily and weekly newspapers, and 145 other publications, agricultural, scientific, technical, and some popular magazines. The need for additional room is more urgent than ever. The library is greatly overcrowded, and the matter of space presents a serious problem, as both shelving and floor space is needed. The student body is growing so large that it cannot be accommodated in the small reading room which we have at present.

### College Farm

The year that has just closed has been the most successful in the history of the College farm. The receipts for the fiscal year just ended are \$21,076.47 or an increase of \$5,250.25 over last year, which was the highest year up to that time. The net profit on the College farm was \$5,115.45 or approximately \$1,000.00 more net profit than the amount shown a year ago. The total receipts from the dairy herd were \$13,686.09 with a net profit of \$3,744.72. The receipts from the coöperative creamery amounted to \$3,511.62 making a grand total of \$24,588.09 collected by the Animal Husbandry Division for the year 1918-1919.

The following table showing the receipts from the College farm for a period of twelve years indicates wonderful progress and demonstrates the wisdom of mixed farming and due consideration to the live stock industry. It will be observed that for the year ending June 1, 1908, the receipts from all sources amounted to \$1,799.37 and that the business has steadily grown and that in twelve years the receipts are almost twelve times the amount they were in the beginning. Attention is also directed to the fact that in the

beginning one-fourth of the total receipts came from the sale of cotton. The acreage devoted to this crop has remained about constant throughout the twelve year period. During the present year the crop was sold on a basis of 31 cents per pound which is approximately 300 per cent more than the proceeds received for cotton twelve years ago. Even at this very high price it is interesting to note that of the entire revenue but little more than one-tenth came from the sale of cotton. Sixty-four and nine tenths per cent of the revenue was derived from dairy products and is evidence of the fact that this industry can be successfully developed in the state of Georgia. Twenty-two per cent of the revenue came from the sale of live stock. The total receipts show an increase of 33.11 per cent over last year.

It is felt that this splendid financial showing would warrant additional expansion in the work of the College farm. It is not only a profitable investment but it serves as a most valuable object lesson for the student body and the large number of visitors that come to the College from time to time. Furthermore, the production of well bred animals for distribution over the state is having an influence on the improvement of live stock in many sections.

While much progress has been made in improving the land and the erection of permanent farm buildings, additional developments in this direction are needed.

With the amount of live stock now owned by the College, it is necessary to devote most of the land to the production of feed crops, and the acreage for 1919 is as follows:

Corn 60, silage 40, oats 42, winter hay 20, cotton 16, rye 15, alfalfa 26, tame grasses 5, grazing crops for hogs 2, making a total of 226 acres.

Approximately 60 acres of peas will be planted after various winter cover crops. This will make a total of 286 acres cultivated during the year.

### Live Stock

Each year substantial progress is noted in the development of the herds and stud maintained on the College farm. There are 192 animals owned by the College, 136 of which are pure breds. This is an increase of 11 animals over the total number owned on June 1, 1918. This is a gratifying condition when it is recalled that twelve years ago the College owned 42 animals, none of which were registered, and the total inventoried value was \$1,817.00. The accompanying statement will be of interest because it shows that this vast holding of live stock has been acquired at an actual profit since the annual expenditure for the purchase of live stock has been barely a tenth of the annual sales and the enhancement in the value of the animals on the farm. In the Holstein herd, consisting of 34 head of registered animals and 5 grades, all except the herd bull and one female have been bred by the College. Of the Jersey herd, consisting of 33 head

# RECEIPTS FROM COLLEGE FARM

Fiscal year	Dairy	Sale of Live Stock	Sale of Cotton and C. S.	Total Receipts	Per cent increase total receipts	% of total receipts		
						Dairy	Live stock	Cotton
June 1st, 1907-08-	\$1,124.44	\$ 72.29	\$ 469.62	\$ 1,799.37	191.1	62.5	4	25.5
June 1st, 1908-09-	3,891.40	241.52	848.75	5,239.42	28.0	74.2	6.2	16.2
June 1st, 1909-10-	4,331.02	319.90	1,831.83	6,709.93	6.5	64.6	4.7	27.3
June 1st, 1910-11-	4,346.87	762.51	1,779.95	7,149.58	20.0	60.7	10.6	24.9
June 1st, 1911-12-	5,099.44	1,846.23	1,421.14	8,581.41		59.4	21.5	16.5
June 1st, 1912-13-	5,675.46	1,520.30	1,113.45	8,581.53		66.1	17.6	12.9
June 1st, 1913-14-	6,036.57	2,667.61	1,623.28	10,335.46	20.4	58.4	25.8	15.7
June 1st, 1914-15-	6,562.60	2,791.57	687.73	10,173.60	1.5	64.5	26.4	6.7
June 1st, 1915-16-	6,700.41	3,056.02	1,043.93	11,002.69	9.14	60.9	27.8	9.5
June 1st, 1916-17-	7,392.04	4,313.75	1,359.59	13,249.18	21.32	55.4	32.3	10.2
June 1st, 1917-18-	10,750.34	3,051.90	1,771.02	15,826.62	18.48	67.9	19.3	11.2
June 1st, 1918-19-	13,686.09	4,694.59	2,439.55	21,076.47	33.11	64.9	22.2	11.1
Total sales - - -	\$75,596.68	\$25,438.19	\$16,389.84	\$119,825.26				
Increase in 12 yrs.-	\$12,561.65	\$ 4,622.30	\$ 1,969.93	\$19,277.10	1,171.2			

of registered animals and one grade, all of them have been bred by the College with the exception of the two herd bulls and two females.

#### Financial Statement of Live Stock for Last Twelve Years

Value of live stock on College farm Sept. 1, 1907-----	\$	1,917.00
Expenditure for purchase of live stock from Sept. 1, 1907 to June 1, 1919-----		14,294.00
Value of live stock June 1, 1919-----	\$22,467.50	
Sale of live stock from Sept. 1, 1907 to June 1, 1919 -----		25,438.19
Net increased value plus sales above expenditures for purchasing live stock-----		31,694.69
	\$47,905.69	\$47,905.69
Average amount expended yearly for purchase of stock--\$		1,191.11
Average annual sales -----		2,119.85
Average net yearly increase in inventoried value of stock		1,712.54

#### Value of Live Stock

The accompanying table shows steady increase in the value of live stock maintained on the College farm. Attention is directed to the fact that a beginning was made September 1, 1907, with 42 animals valued at \$1,917.00. None of these animals were pure breds. At the present time the institution owns 192 animals valued conservatively at \$22,467.50 consisting of the following pure bred and registered breeding animals: 5 Percheron horses, 31 Jersey cattle, 34 Holstein cattle, 7 Guernsey cattle, 16 Shorthorn cattle, 12 Hereford cattle, 6 Berkshire hogs, 16 Hampshire hogs, 9 Poland-China hogs, or a total of 136 breeding animals. Eight grade cattle are being carried for demonstration purposes. Attention is called to the fact that during the twelve years the value of live stock has increased \$20,550.50. The number of animals maintained has been increased by 150 head, and the value has increased 1,072.21 per cent.

#### Value of Live Stock

Fiscal year	Value	Number	Per cent increase in value
Sept. 1, 1907 - - - - -	\$ 1,917.00	42	
1908-1909 - - - - -	5,082.50	71	165.1
1909-1910 - - - - -	6,937.50	132	36.5
1910-1911 - - - - -	10,042.00	213	44.7
1911-1912 - - - - -	10,265.00	159	2.2
1912-1913 - - - - -	12,005.00	167	16.9
1913-1914 - - - - -	13,580.00	170	13.1
1914-1915 - - - - -	14,532.00	163	7.0
1915-1916 - - - - -	17,310.00	145	19.1
1916-1917 - - - - -	19,870.00	146	14.8
1917-1918 - - - - -	21,554.00	181	8.4
1918-1919 - - - - -	22,467.50	192	4.23
Total increase 12 yrs. -	\$20,550.50	150	1,072.01



### Sale of Live Stock

Each year shows added revenues derived from the sale of breeding stock from the College farm. The accompanying table shows that during the last year a total of 89 animals were sold, compared with a total of fifty-one for the previous year. Fifty-seven out of the eighty-nine were pure bred and registered. A large number of these were high class bulls that have gone into every section of the state and will be of untold value in increasing the earning capacity of the native stock in the communities to which they go. The total selling price of these animals was \$4,694.59, which is an increase of \$1,643.69 over the sales for the previous year. Attention is called to the fact that the inventoried value of animals still remaining on the College farm is \$22,467.50, as compared with \$21,554.00 for the fiscal year 1917-18.

Kind	Number	Purebred	Grade	Price per head	Total value
Dairy Cattle - - - -	19	15	4	\$64.87	\$1,232.50
Beef Cattle - - - -	22	16	4	105.03	2,310.59
Hogs - - - -	45	25	20	13.70	616.50
Horses and Mules - -	3	1	2	166.67	500.00
Service fees - - - -					35.00
Total - - - - -	89	57	30		\$4,694.59

### Receipts from Dairy Herd

The receipts from the dairy herd have been gratifying from the very beginning. For the year ending June 1, 1908, the total receipts from the dairy herd were \$1,124.44. The close of the present fiscal year shows a total income of \$13,686.09. The most interesting facts are revealed in the last column of the accompanying table. In this it is shown that twelve years ago the return per cow was \$86.49. The second year the receipts were \$129.71 per cow. The records of production were kept from the beginning and poor individuals were constantly eliminated. The heifers sired by high producing bulls were retained in the herd and were used to replace the more inferior cows. By 1913 the returns amounted to more than \$175.00 per cow, or more than double what they were five years previous. During the past year the cows made a gross return of \$342.15 per cow.

Fiscal year	Total Receipts	No. cows	Return per cow
June 1st, 1907-1908 - -	\$1,124.44	13	\$ 86.49
June 1st, 1908-1909 - -	3,891.40	30	129.71
June 1st, 1909-1910 - -	4,331.02	30	144.37
June 1st, 1910-1911 - -	4,346.87	30	144.89
June 1st, 1911-1912 - -	5,099.44	32	159.35
June 1st, 1912-1913 - -	5,675.46	32	177.36
June 1st, 1913-1914 - -	6,036.57	34	177.53
June 1st, 1914-1915 - -	6,562.60	34	193.01
June 1st, 1915-1916 - -	6,700.41	35	191.44
June 1st, 1916-1917 - -	7,392.04	36	205.33
June 1st, 1917-1918 - -	10,750.34	40	271.26
June 1st, 1918-1919 - -	13,686.09	40	342.15
Total increase 12 yrs. -	12,561.65	27	\$255.68

### Cooperative Creamery

The coöperative creamery operated by the College has had another successful year. During the twelve months \$3,132.11 was paid to patrons for \$4,826.47 pounds of butter fat. This represents an average price for the year of approximately 65 cents per pound. The butter fat is shipped in from isolated rural communities where the average selling price of butter would be not much more than one-half the price per pound paid for butter fat.

This creamery is performing a most useful function. The volume of business remains about constant. On the other hand, it is sufficiently large to afford ample laboratory material for instruction of the regular and special students in agriculture and home economics. In the second place, this ready market has been the means of starting a great many farmers into the dairy business.

### POULTRY DEPARTMENT

In poultry husbandry 376 long and short course students receive instruction. A new course consisting of six weeks of lecture and laboratory work was offered this winter and it was completed by 47 home demonstration agents.

The unusually high cost of feed and labor made it necessary to reduce the laying flock to 600 of the best producers. These birds have laid in four months, from January 1 to May 1, 28,154 eggs weighing 3,519 pounds, an average of 47 eggs per bird. This is four more eggs than the average Georgia hen lays in an entire year. Some very good records were made by individual birds, one White Wyandotte hen laying 28 eggs in 31 days and one Barred Plymouth Rock laying 46 eggs in 50 days.

#### Record of 600 Hens

Month	Eggs Layed	Weight of Eggs
January - - - - -	4,405	551 lbs.
February - - - - -	4,940	618 lbs.
March - - - - -	7,105	888 lbs.
April - - - - -	11,704	1,462 lbs.
	28,154	3,519 lbs.

Average number of eggs laid per hen in 4 months-----4  
Number of eggs laid by average Georgia hen in 12 months-----4

The demand for hatching eggs and young chicks is far greater than can be supplied—2,043 hatching eggs and 527 chicks were sold.

Unless the department has added more instructors, more land and buildings, and better facilities for incubation, it cannot meet the demand for the instruction of students and the dissemination of purebred breeding stock throughout the state.

Because of the high cost of feeds more land should be available for experimental work in determining the best poultry rations worked out with home-grown Georgia feeds.

### Experimental Plats

Fertilizer tests that have been carried on in various parts of the state had to be contracted during the past year because of lack of help. Ten areas that were thought to be the most typical of the state have been continued and the others dropped.

Seed selection was begun during the year with four varieties of soy beans. It is hoped that some improved strains especially adapted to Georgia will be available for distribution in a comparatively short time.

The distribution of selected cotton seed has been continued, and in addition to College No. 1 some ten bushels of Meade cottonseed have been distributed in the state. In addition to the cottonseed several varieties of wheat were distributed last fall. Two special selections were sent out and arrangements were made with the growers for the College to receive one-fourth of the crop threshed this spring. It is hoped in this way to distribute this improved wheat with the greatest possible rapidity.

A number of imported grasses have been secured during the year and planted at Athens, Tifton and Douglas. These grasses were secured through the coöperation of the Office of Forage Crop Investigation from their fields at Biloxi, Miss. In addition to the imported grasses, quite a number of other forage crops are being tried out on these three areas. It is purposed to push the grass work more rapidly now than in the past as conditions seem to be favorable for securing some definite results.

Fifty-five strains of alfalfa have been seeded during the year. These strains have been selected based on past experience and from the inspection of alfalfa grown at Arlington farm near Washington. Some of these strains seeded last fall seem to give considerable promise. It is believed that the type of alfalfa especially adapted to Georgia is one with narrow leaves that is rather slow in starting growth. It will be necessary to establish a source of seed of this type of alfalfa, and it is hoped that it will be possible to do this in the near future.

The work for cotton improvement has been materially helped during the year by the installation of a cotton gin and press. The gin was donated by the Lummus Cotton Gin Company of Columbus,

Ga. For the protection of the records that will be held at the demonstration field until completed a fire proof safe has been installed. This will give adequate protection of the results obtained by the money expended in this line of work.

### Campus

The maturing of the shrubs and plants on the College campus makes it more beautiful yearly. It takes time to develop a landscape effect that is worth while. It is now ten years since the first plantings were made on the present campus. In January, 1909, when the main college building was opened, everything was in the future. If the development of the coming ten years will equal that of the past, the people of Georgia may well be proud of the grounds surrounding their institution.

Little planting has been done during the past year. Several clumps of shrubs have been set and others rearranged at the western end of the main building. These plants and rearrangements were necessitated by the building of new roadways in that section of the campus. The coming season it is expected will demand heavy plantings, due to the erection of the Animal Husbandry Building, which will require the development of a new section of ground which has hitherto been devoted to other purposes.

The woman's building which is now in the process of construction will form the center of an entirely new portion of the campus. The general lay of the land in front of and around this building will permit of the making of a large sunken garden, which may be made most attractive and beautiful, as well as serve the purpose of an out-door stage and general meeting place.

Gradually the formal garden between the main building and the veterinary building is maturing. Last year this particular part of the campus produced quantities of flowers. Little by little the soil is being brought into such a condition that its adaptability for floral cultural purposes is being greatly improved. Consistent progress is being made in the development of the park-like woodland in front of the main building.

### Roads and Drives

With the building of a bridge over the little creek bounding the horticultural grounds, which for the present has been held up due to a shortage of labor, the river drive connecting the farm with the Whitehall road will have been completed except for one link. In the drive the college will have one of the most beautiful boulevards in the South.

More than ever before the drives running through the property of this institution are being used for pleasure and recreation. The shrubs and plantings about the driveways have attracted the attention of visitors to such an extent that many inquiries from all sections of the state have been received, requesting information concerning them.



Plantings of trees along the main drives have been started in commemoration of the alumni, students and staff who served in the World War. The weather and labor conditions have retarded this work, but it will be completed next winter.

The main drive from the south entrance of the administration building has been widened. The construction of the women's building will require the opening of an elliptical drive, connecting this building with the main drive. This new road will form the boundary of a sunken garden, and it is expected that in time this section will be one of the most attractive on the campus.

Few improvements about the College have brought it so to the attention of the public as the development of the driveways. There are hundreds of persons familiar with the institution and farm who would never have visited the College had it not been for its attractive and well-kept roads. The completion and betterment of the existing system should be constantly striven for, and is an object worthy of our best efforts.

### Prizes and Scholarships

During the collegiate year many public-spirited citizens have continued to manifest a lively interest in the college in the way of contributions for the carrying on of special lines of work and new friends have come forward with a desire to aid in these undertakings.

The establishment of the Students' Army Training Corps at this institution last October, furnishing both pay and subsistence to its members, to a great extent removed the necessity for financial aid to students, but with the demobilization of that organization, the necessity for such aid again became apparent. The Georgia Bankers Association offered its assistance in several instances, as it has done for a number of years, and the income from the William Wilson Findley Foundation was also used. H. G. Hastings & Co. also contributed liberally in this direction.

The importance of more careful and more scientific attention to the development of pastures in Georgia is now being more fully recognized than ever before in the history of the state. The College is doing splendid and satisfactory work in pasture development and in aid of this work Swift & Co. contributed the sum of one thousand dollars. The result of this work will become apparent at no distant date in vastly improved pastures all over the state.

The Cotton Seed Crushers Association of Georgia continues its good work in furnishing funds to aid in carrying on investigations as to the oil content of cotton seed. This work has already given excellent results and its importance becomes annually more and more fully realized.

For the improvement of live stock the Central of Georgia Railroad has donated money for the purchase of a registered bull.

The Southeastern Fair Association and the State Fair Association donated \$500 and \$525 respectively for extension and research work. Clark County contributed \$1,310 for this kind of work.

The influence of the short course of study for boys and girls at the College upon the agricultural development of the state and the bettering of conditions on the farms cannot be overestimated. The success of this work is dependent in largest measure on those who furnish the scholarships that enable hundreds of boys and girls to come from the farms to the College where they receive the benefits of instruction arranged especially to answer their needs. To the boards of trade, county commissioners, women's clubs, railroads, fair associations and public-spirited citizens who contributed more than five thousand dollars for this purpose, the hearty thanks of the College is extended.

The College takes this opportunity to express its deep appreciation of all the aid given by its many friends in the furthering of the work it is doing for the advancement of agriculture in Georgia.

### **The Executive Office**

As in previous years, my sole time and attention has been given to the work of the College. By your direction, in addition thereto I have carried on the work of Federal Food Administrator for Georgia and acted as Zone Chairman for the fifth district, consisting of the states of Georgia, Alabama, Florida, North Carolina, and South Carolina. In addition I have been actively engaged in all welfare work such as that associated with the Liberty Loan canvasses, the Red Cross, the Y. M. C. A., and all other worth while war activities which engaged the attention of the people of the United States during the past year.

It has been my business to familiarize myself as much as possible with every detail of the work of the College and to give to its general supervision and direction the best service I am capable of rendering. I sincerely trust that you may feel from your examination of the property, the reports of the professors, the record of student attendance, and the success of our extension work, that the institution has made progress and has satisfactorily discharged to its constituency the duties and obligations resting upon it in the most trying year of its history.

It is needless to call your attention to the rapid growth which the institution has made and still must make if it is to fulfill the ends for which it was established. The number of our workers has greatly increased by reason of the war emergency, our staff now numbering more than 300 individuals. Of this number approximately 82 are on the administrative, technical and extension staff, either having permanent or temporary headquarters in Athens, while in the counties there are 238 agents. It is in itself a problem to keep this large number of workers effectively organized and performing

their duties in a true spirit of service and in happy, harmonious and coöperative relationships.

In spite of the fact that our staff has grown from a total of 7 to more than 300 in the past twelve years, we are still unable to cope with the demands made upon us for aid. I wish it were possible to succinctly inform you of the nature and character of the great variety of requests which center in my office for specific aid from the College or its representatives. The motto of the institution has always been to do "something for everyone," and it is remarkable to see how splendidly our staff has responded to the spirit of this motto. Permit me to say that I do not believe any finer body of workers has been assembled in any state, or that any group of men and women associated with an institution of this character have ever shown a finer spirit of loyalty or a greater willingness to sacrifice themselves in the interest of the cause they serve.

It is impossible to single out from a group of workers of this character individuals for commendation without doing injustice to others. Therefore, I feel that in a sense of justice and fairness it is better for me to commend the staff to you collectively and to say that they have faithfully and efficiently discharged the duties which devolved upon them and that they are worthy of your highest approbation.

Last year there were 17 projects under the Smith-Lever Act. This year we have 19. The additions consist of a project on bee-keeping and one on plant pathology. Both of these are important matters to the people of Georgia. Both appear to have been greatly neglected. The specialists employed under these projects, in coöperation with the United States Department of Agriculture, have done good work and created a renewed interest in both of the matters concerned. All the other projects have been carried forward as originally drawn up, except that additional workers have been put on and a more complete degree of specialization in certain lines thereby made possible.

The report of the Treasurer of the College, Mr. T. W. Reed, a properly bonded officer, sets forth in detail a statement of all moneys received and disbursed by this institution. The funds received from all sources have been spent as nearly as possible in accordance with the budget approved at the last annual meeting of the Board. Where changes or modifications have become necessary they have had the approval, as required by your regulations, of the Executive Committee. No funds are handled or disbursed through this office.

For your information, as well as all others who may be interested, the Treasurer's statement, known as Addendum A, has been attached to this report. It is made up in accordance with your requirements and that of the States Relations Office, under the joint agency of which we carry forward all projects maintained out of



funds from state or federal sources provided under the terms of the Smith-Lever Act. You will observe that this report presents the receipts and disbursements available for the maintenance of the work of the College proper and for the maintenance of the State Extension work. The funds used for State Extension work are spent so as to insure the state's receiving from federal sources an amount approximately twice as large as that appropriated by the state. You understand, of course, that the United States Department of Agriculture has at its command various appropriations made available by Congress and which may be expended under such terms and provisions as the Secretary of Agriculture approves. All of the work, therefore, carried on coöperatively with the United States Department of Agriculture is conducted in accordance with the Memorandum of Agreement signed by your direction with the Secretary of Agriculture on June 15, 1914.

By reason of the stable organization which the College has enjoyed through the foresight of its Trustees and by reason of the excellence of its equipment and personnel, it has been possible to have assigned to Georgia several hundred thousand dollars a year of Federal funds, placed by Congress in the hands of the Secretary of Agriculture for such distribution as he may see proper. The fact that your organization and handling of the institution has made possible the receipt in Georgia of these large sums of money is not properly understood or appreciated, and it is for this reason that I am calling attention to this matter at the present time in order that full justice may be done to you, the institution and its staff of instructors.

As you doubtless know, Mr. T. W. Reed, our Treasurer, is also Treasurer of the University of Georgia. This arrangement is in accordance with the provisions of the Conner bill, under which this institution was established. The Trustees of the University of Georgia require the Treasurer to present a financial statement each year. The data presented in Addendum A is taken from this report.

As you doubtless know, the law requires the Chairman of the general Board of Trustees of the University of Georgia, the Hon. Henry D. McDaniel, to present each year to the Legislature through the Governor a financial statement of the receipts and expenditure of this institution, including a statement of the salaries paid to all employees other than those working coöperatively with us through the Memorandum of Agreement cited above, and whose salaries are therefore paid directly by the Treasurer of the United States of America. In other words, this financial statement accounts for all funds received and disbursed by our Treasurer but does not include the amounts paid to persons employed in the Extension Division whose salary, travel and incidental expenses are defrayed out of funds which may be termed indirect Congressional appropriation to Georgia, or by the counties, towards the maintenance of me-



and women county agents. Since these funds are not handled by our Treasurer, it is manifestly impossible for us to account for them. However, in obedience to the mandate of the Legislature a detailed statement as required under Section 6 of Act No. 517, known as the General Appropriation Act, has been prepared and handed to the Governor and is presumably available to all who wish to secure further information concerning the support of our extension work from funds other than those provided by direct appropriations from the state or the Federal Government.

You can readily appreciate that the executive office is called on to handle an ever increasing amount of business and correspondence with the people of the state. I am not over-stating the case when I say that hundreds of individuals are each year discovering just what services the College is in position to render them. Without the aid of an expert staff it would not be possible to disseminate the vast amount of essential information which we distribute through correspondence alone. Nor would we have any adequate means of satisfying the ever-increasing number of visitors who come here for personal consultation. As a predominately agricultural state it is not surprising that there should be such general and uniform interest in the work of our College and such an insistent demand made upon its workers for special information and advice.

While we have been busily engaged in training leaders in Athens and organizing and conducting courses of a type which has won recognition and favor for this institution outside of Georgia, we have not neglected the other duties and responsibilities resting upon us. Hence, you will not be surprised to find that 31,864 boys and girls have been enrolled in our various clubs during the past year, that 8,935 women has been trained through community service organizations, and that thousands of farmers have coöperated with us in conducting demonstrations. Approximately 483,609 people have attended the various meetings organized by the Extension Division and thus received a vital message.

It has been my privilege during the year, in spite of the confining nature of the duties which occupy so much of my time at Athens, to travel through the state quite extensively and to visit and address the people in various communities in Georgia and other states as well. From June to November it was necessary for me to attend a conference, lasting from two to three days, nearly every month in Washington in association with the Food work. I frequently had to make two and three trips a week to Atlanta to confer with groups of citizens representing practically all the food and agricultural interests of the state. In addition to speaking at various rallies I addressed the Georgia Hotel Men's Association at Columbus, the National League for Women's Service in Atlanta, the Georgia Educational Association at Macon, and the citizens of Savannah. In addition I attended various conferences of our county

agents and specialists held in various parts of the state. During the year three special illustrated addresses were prepared on phases of the food and war situation. Most of my addresses naturally centered on this subject, and I found the people in a very receptive frame of mind and glad to respond to any request the Government might make of them just so long as they felt it would aid in bringing the war to a prompt conclusion.

By your instruction I also spent ten days on the Victory Loan Trophy train sent out by Hon. Carter Glass, Secretary of the Treasury, to tour Virginia and West Virginia. During this time I spoke approximately 40 times to more than 100,000 people. The train was very successful in raising a large amount of funds for the Victory Loan.

From June to November 11, the day on which the armistice was signed, a considerable part of my time and energy was consumed in discharging the duties of the office of Federal Food Administrator for Georgia and acting as Chairman of the Fifth Zone. These duties were most arduous and exacting and the burden heavy to bear at times, especially when it was not always clear to the public just what ends were to be accomplished by the enactment of certain regulations. Nevertheless, I am thankful that your generosity permitted me to carry forward the work of this most important and essential office. While every factor contributed its share to the winning of the war, it is certainly true that it would have been lost but for the generous manner in which the American people responded to the cry of Europe for bread. While there are many bright pages in the annals of Georgia history, there is none more glorious than that which will set forth the fact that when her citizens were asked to deny themselves the white bread of liberty and privilege and civilization, that the hungry and starving people of Europe might be fed, they gave not the one loaf for which they were asked, but two loaves instead.

The most difficult and trying problem with which the Food Administration has had to deal was that of the stabilization of the price of cotton seed. This stabilization was undertaken at the request of a group of citizens from Georgia who went to Washington as representatives of the producers and manufactures and agreed with the officials there as to the price which cotton seed should bring and requested their stabilization on that basis. When the price was stabilized at the request of the agencies indicated the Food Administrator of this state and his associates exerted every power at their command to have the regulations carried into effect. The food officials from this state were instrumental in having the price of seed first agreed upon increased by the Food Administration in Washington so that our farmers gained approximately \$800,000.00. By declining to reduce the price of seed by \$4.00 per ton when the most insistent demands were made upon this office to that end,

many millions of dollars were saved to our farmers. It is certainly known to all reasonable men that if stabilization had failed the price of seed would have been cut to \$40.00 a ton. The service work performed in the interest of our farmers in this one direction alone by the Food Administration was therefore of incalculable value to their interest, and whether all of our citizens can see the facts now or not they will later find out that but for the firm and determined stand which was taken relative to this matter the losses on the seed crop would have been exceedingly heavy, the credit of our farmers, manufacturing interests and banks seriously affected, and the whole cotton seed industry thrown into disorder.

It seems quite appropriate under the circumstances to present the following excerpt from a letter written by Dr. George H. Denny, Chief of the Cottonseed Industry Division of the United States Food Administration, Washington, D. C., under date of December 21, 1918. "You stood squarely for the original agreement with the producers and resisted the enormous pressure brought to bear by the special interests involved at various stages of the struggle. It ought to be a comfort to you to feel that you have so splendidly 'kept the faith.' The thousands of producers in Georgia may never know the service you have rendered them against odds, but it is a fact that you have given them justice and a fair deal. At the same time no other factor in the industry has been given anything but square and even-handed equity."

All regulations concerning food are now abrogated save those pertaining to cotton seed, and it will undoubtedly be possible to close up the office of Federal Food Administrator for Georgia at an early date. In this connection permit me to say that whatever has been accomplished of merit or importance was solely achieved through the devoted, patriotic service of the more than 300 Georgia men and women who were associated with me as volunteers and who supervised and carried forward the work of the Food Administration in their respective counties at great personal sacrifice. These individuals were sometimes subjected to bitter and unjust criticism, but they have proven faithful even unto the end. In the perspective of the years to come the public will be able to form a more correct estimate of the nature and character of the invaluable services they performed. It is to be hoped that a full measure of justice will be done these patriotic men and women who served the cause so faithfully and efficiently by holding the support trenches against all assaults and seeing that the food essential to assure America's dominating the world and crushing autocracy was always forthcoming. In this connection I wish to say that the College and its staff has played an important part throughout the food campaign. Every man and woman connected with the institution served as a volunteer and that they did yeoman work is shown by the record which Georgia made. To attribute all that has been accomplished to their



effort would be unjust and unfair, and there is no intention of doing so in this report.

In this connection it is proper to state that all plans of the Food Administration and of the Government looked to the continuance of the war for another year, and hence those who may have actually suffered some disadvantage by reason of the sudden change which the signing of the armistice brought about should exercise patience and consideration, realizing that the men, upon whom fell this crushing burden of the responsibility of handling the distracting situation thus created, lived up fully to their reputations and did the best which could be done under the circumstances. The fact that on the signing of the armistice Mr. Hoover was selected and sent abroad to represent the Government and later placed at the head of the Food work of the allied Governments shows the character and the caliber of the man who led the Food forces of America so successfully during the two years in which we were engaged in the world war.

#### Inventory

The inventory for 1919 is presented for your consideration. Ample deduction for deterioration has been made in all cases and I believe it fairly represents the value of the property and equipment which has been assembled under your direction. Certainly in no instance has an over-statement been made. For instance, the main building has returned the same figures as in former years. A competent gentleman who recently inspected it said we could not replace it for \$200,000.00. It is a well known fact that our land could be sold for much more than the price indicated.

Land, 830 acres -----	\$207,500.00
Main building -----	135,000.00
Power house, including heating plant, light water, plumbing, sewerage, gas, and sidewalks-----	33,250.00
Division of Agronomy, including barns, houses and dem- onstration field equipment -----	16,574.63
Photographic room equipment -----	300.00
Division of Forestry-----	5,107.83
Division of Horticulture, including barns, grounds and other equipment -----	23,562.00
Extension equipment and exhibit cases-----	1,750.00
Division of Agricultural Chemistry, including soil lab- oratory -----	6,911.93
Division of Agricultural Engineering, including labora- tory -----	45,192.83
Division of Veterinary Medicine, including hospital and serum plant -----	24,954.12
Division of Poultry Husbandry, including buildings-----	13,275.00
Division of Animal Industry, including creamery-----	5,688.00
Library -----	7,187.65
Livestock on farm -----	22,467.50
Farm buildings, barns and tenant houses-----	36,529.76
Tools and implements-----	3,270.75
Division of Agricultural Education, including building and equipment -----	13,275.00
Total -----	\$601,797.00



You will see from the statement set forth above that there is approximately \$601,797.00 worth of buildings, grounds and equipment under your charge. This represents an increase in total value of \$56,211.57 over last year and this is accounted for in materials and equipment. Last summer the General Assembly of Georgia made an appropriation of \$10,000.00 with which to commence our Animal Husbandry building. Some \$11,000.00 has been spent on this enterprise, which now must await further appropriations from the Legislature before it can be completed. Some funds have been expended for materials to be used in the new women's dormitory. These have not been included in the present inventory, however. Since our buildings have been kept in good repair they have not deteriorated in any sense and are still worth \$200,000.00. Our various divisions are holding their own by reason of the small amount we are able to set aside from year to year for laboratory equipment. While we have accumulated much apparatus many of our divisions still need large additions to their equipment.

The value of the equipment of the various divisions is as follows: Division of Agronomy, \$16,574.63; Division of Forestry, \$5,107.83; Division of Horticulture, \$23,562.00; Division of Agricultural Chemistry, \$6,911.93; Division of Agricultural Engineering, \$45,192.83; Division of Veterinary Medicine, \$24,954.12; Division of Poultry Husbandry, \$13,275.00; Division of Animal Husbandry, \$5,688.00; and the Division of Agricultural Education, \$13,275.00. The total value of the livestock on the farm is \$22,467.50.

No additions have been made to the roads during the year. They have been kept in a fairly good state of repair. Such service as the Commissioners of Roads and Revenues of Clarke County have been able to give us has been used chiefly in grading the grounds in and around the new Animal Husbandry building and the foundation of the women's dormitory. Altogether this has no doubt improved the value of the grounds by several thousand dollars.

### Needs of the College

An examination of our records will convince even the most uncharitable of the fact that economy, efficiency and skillful management have been exercised by your honorable body in handling every phase of the work of this institution. If the state were to sell the property which has been in your charge for the last twelve years the returns would be at least equal to the gross amount expended for the maintenance of the College. This is a record which I believe has seldom, if ever, been duplicated before, and is the only evidence to show that every dollar which has come into the hands of the Trustees has been expended to remarkable advantage. In spite of this fact, we never experienced such difficulty in trying to make ends meet, due to the steady increase in cost which has taken place for several years past, but more particularly in the last twelve months. It is only by the closest economy and the most careful

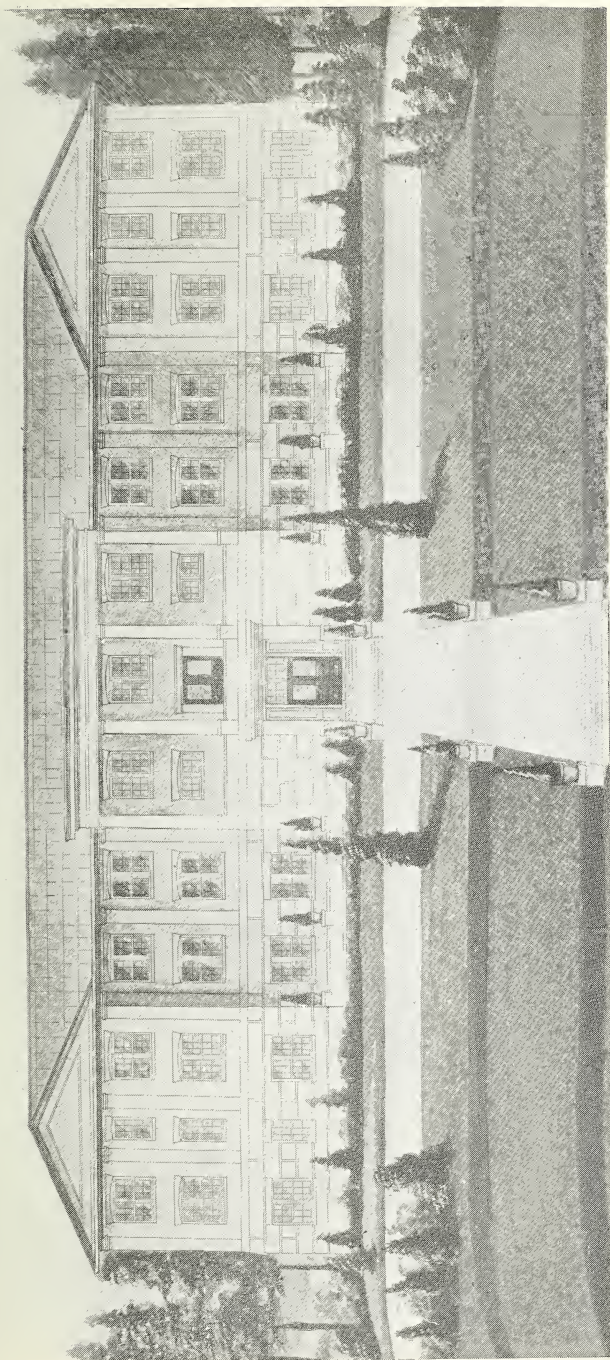
administration that it has been possible to keep the absolute and necessary expenditures of the institution within the funds at your command. But for the fact that you have had slight sources of income from various turn-overs associated with the several divisions this could not have been accomplished. In other words, instead of operating on a maintenance of \$70,000.00 you are really operating on an \$80,000.00 income. Presumably it is not the intention of the state to expect the Trustees to find the funds from other than legislative sources essential to the maintenance of the institution.

While no new divisions have been created during the year, your request for funds for the proper maintenance and expansion of the Divisions of Agricultural Education and Home Economics was not granted last year, and hence we have been able to do only a part of that which was essential towards the equipment, organization and expansion of these two most essential divisions. These two divisions, as you doubtless know, are concerned with the training of teachers for vocational agriculture and home economics. The success attending their efforts will determine in large measure the amount of the Smith-Hughes funds which can be made available to elementary or secondary schools in Georgia. The liberal appropriations available to the state under the terms of this measure are such as to justify you in asking the state for sufficient money to properly endow and maintain these divisions on a basis which will meet with the approval of both the State and Federal Vocational Boards. Your policy apparently is to ask the Vocational Board to find from outside sources the greater part of the money needed for these divisions, but even in that event you must supply and maintain the necessary equipment and provide the necessary housing facilities out of the funds at your command. Hence increased funds for this purpose are essential.

Our experiment in co-education, commencing last September, has proven eminently successful. Twenty-four young ladies are registered in the Junior class. Most of them expect to continue their work next year and hope in June, 1920, to receive their degrees. Another class will enter this fall. Presumably we may have 50 or 60 women in the four-year course alone. Additional instructors must be provided. Larger laboratory facilities are needed. The general maintenance and up-keep of scientific and technical courses of this character call for large expenditures. The institution cannot perform the duties and obligations resting upon it with reference to the training and education of these women without increased funds for maintenance. The necessity for encouraging work of this character has been made evident by the record of men in our camps where it was shown that approximately one-third of the men drafted were rejected primarily for defects due to improper nutrition at some period in their lives. The loss of efficiency to the nation in this direction has been simply appalling. In the future we

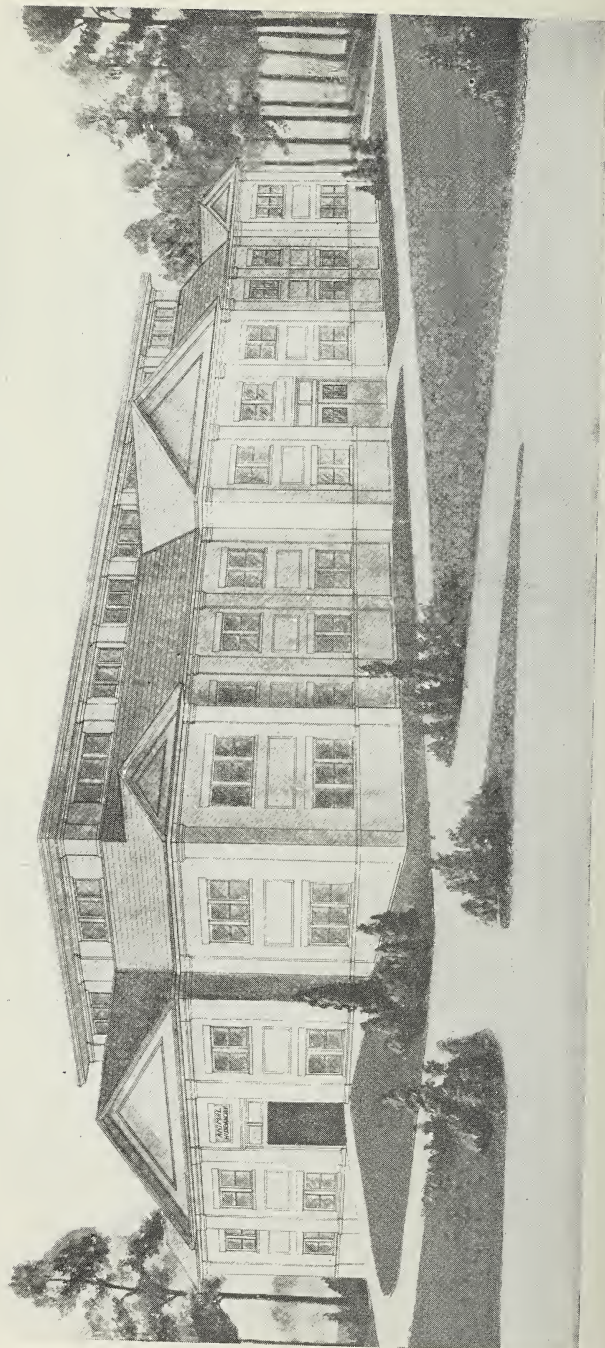


## DORMITORY FOR WOMEN



Through the wise management of the plant and the funds of the Georgia State College of Agriculture by its Board of Trustees and through the aid of friends, the building of the dormitory for women is made possible. No special appropriation was made by the Georgia Legislature for this building. See page 88.

## ANIMAL HUSBANDRY BUILDING



The Animal Husbandry Building has been "hulled in" with the aid of an initial appropriation passed by the Georgia Legislature in 1918. The live stock interests of the state ask that this building be completed as early as possible in as much as it is urgently needed for student instruction, for live stock exhibitions, and for co-operation with the United States Government in animal husbandry.



cannot compete with other nations unless we improve the physical condition of our men and women and look more carefully after the dietary needs of our working population.

The Division of Home Economics is destined primarily to train leaders who will go out into the various counties and into schools of all classes and demonstrate how the nutrition of our people may be made normal at even a lower cost than now prevails. There is nothing which we can undertake to do through the agency of this institution more important, therefore, than to train women in sufficient numbers to meet this fundamental need of the state and the nation.

Your attention has been previously directed to the woeful lack of veterinarians in our state. There are now, I believe, only about 100 in Georgia. Fifty per centy of these are employed in state or government service, hence there are only a few men available to care for our livestock when they become sick or diseased. We have \$200,000,000.00 worth of livestock in Georgia at the present time and only about 52 licensed veterinarians to aid in their care. Most of these men are located in the larger towns and cities, hence the large amount of livestock maintained in the open country is large, without adequate protection. Undoubtedly millions of dollars worth of livestock are lost every year in this state because we have not enough competently trained veterinarians to look after them. A considerable group of men who are returning from the army and navy are asking to be trained along this line. It is obvious that we can build up a great interest in this course provided we are able to endow it on the proper basis. I know of nothing that could be done which would be of greater interest or advantage to the state. I consider it essential, therefore, that sufficient funds to enable us to organize and equip this division and to employ a sufficient number of veterinarians to meet the standards of education set up by the Government be provided.

But for the fact that the Government has dealt so liberally with us the College would still be a comparatively small institution. Not only has Congress made us the recipients of funds available under the Smith-Lever Act and to some extent under the Smith-Hughes Act as well, but the large emergency appropriations to which reference has been made elsewhere have enabled us to employ many specialists and to organize and expand our Extension Division on a basis somewhat commensurate with the needs of the state. To the layman it may appear, judging by the amount of funds disbursed directly or indirectly through the agency of this institution, that we have been liberally supported in a financial way. From one point of view this is correct, but the fact must never be lost sight of that the greater part of the funds available to the College can only be used for specific purposes, and that every time any of these funds are utilized for the advantage of the people of Georgia a special

burden of expense is placed upon the College. The Smith-Lever Act forbids the use of the funds available under its terms except for certain definite things. We cannot use any of this money for buildings. The state is expected to provide all housing facilities and offices. This is also true of all men who work coöperatively with us. The State Vocational Board has expected us in the past to offset any funds they make available to us. It is easy to see, therefore, how we are embarrassed financially by the very funds that have been made available to us, making it absolutely necessary that our maintenance be increased in order that we can successfully carry the superstructure of the load which the arrangements now in force and effect has placed upon us.

Anyone who has examined into the nature and character of the work performed by the College knows that every dollar received by it has been expended to the advantage of our people. Hence since the Government is willing to entrust these funds to our care it is difficult to understand why the state, with all the riches and resources at its command, should hesitate to make available the small amounts we ask in order to make it possible for the College to discharge its duties and obligations to the people of Georgia.

At the present time our income for maintenance is \$70,000.00. For two years past you have asked that it be increased to \$80,000.00. Ten thousand dollars would not offset the increased cost which we have now annually to face. In addition, we must have \$10,000.00 to properly support, equip and maintain the Home Economics Division. The Legislature instructed us to put on a Degree Course in Veterinary Medicine, but did not give the \$10,000.00 you asked to be appropriated for this purpose. It is just as essential now as it ever was that you secure these funds.

The need for adjusting salaries has already been directed to your attention. This can only be done if increased appropriations are made available. It seems to me, therefore, that the minimum amount which you can hope to maintain the work of the College would be \$100,000.00 a year. This represents an increase of \$30,000.00 over the funds now in hand. It is a very modest request to make in view of the great needs by which the College is confronted.

You understand and fully appreciate the necessity for the continuance of the fund of \$40,000.00 appropriated for the conduct of the state extension work, and the \$2,500.00 made available for Farmers' Institutes. In addition thereto the state will no doubt in accordance with its contract with the Federal Government, make available the usual offset to the Smith-Lever fund. The amount necessary to secure the Federal funds available under this act will be in 1919-1920, \$109,085.08, and for 1920-1921, \$130,062.98. The foregoing represents an increase of approximately \$21,000.00 a year from state sources for each of the two years mentioned. When

his offset is made available the Government will provide a similar amount, exclusive of the \$10,000.00 initial appropriation to which the work of the Smith-Lever Act was first inaugurated, and which does not have to be off-set. The work accomplished by our county agents, as set forth in this report, I am sure convinces all of the necessity for making the indicated offset available for the next Legislative biennium.

At your urgent request last year a bill asking an appropriation of \$60,000.00 for the erection of a building to be used for the instruction of soldiers sent here for training by the Government was introduced into the Legislature. It was pointed out clearly at the time that when peace was concluded this building would constitute an essential part of the equipment of the College and would be used for the display of farm animals and the instruction of students. An initial appropriation of \$10,000.00 was made and the building has been hulled in. It will take a minimum of \$50,000.00 to complete this building. It cannot be used with any degree of satisfaction until this is done. Although we have \$200,000,000 invested in livestock in Georgia, we have no adequate facilities provided for the instruction of students in Animal Husbandry. Many states have provided better facilities for this purpose than we have here in Georgia.

The crowded condition of our buildings from the standpoint of students and office space is such as to necessitate enlarged quarters for this important division. This project has been endorsed by the livestock men of the state and has their enthusiastic support. Under the circumstances, and in view of the initial appropriation made for this purpose, it seems clear that the Legislature will provide the additional \$50,000.00 needed with which to complete our Animal Husbandry building. I respectfully urge upon you the necessity of securing the funds in question. To do less, in my judgment, would be unfair to the livestock interests of Georgia and the hundreds of young men who are now coming to Athens each year to study and specialize in this subject.

It is as necessary as ever that we secure complete control and possession of certain property owned by negroes and quite closely adjacent to the main building and the ground on which we are erecting our dormitory for women. It could possibly be purchased at a cost of about \$10,000.00. The institution must have it sooner or later, and at the present time it is a nuisance, and more or less of a menace, as well as being unsightly. I trust you can find ways and means, therefore, of securing it at an early date.

Progress is now being made towards establishing a dormitory suitable for the housing of our women students. When this is accomplished one of our difficult problems will have been solved. But our need for dormitories will not have been satisfied by any means. At the present time there are rooms in the University



dormitories for only 150 students. By far the greater number of boys coming here, therefore, have to seek accommodations in the city of Athens. Under such conditions the cost is prohibitive to many boys, and this in spite of the large benefits which accrue to our students through the agency of our Self-help Committee and the scholarships provided under the Brown and other trust funds. The time is at hand when the state should erect a large and commodious dormitory for male students on the University campus. A structure adequate for this purpose would cost approximately \$100,000, and would represent one of the cheapest and best investments the state has ever made. In justice to the young men of Georgia an effort to secure such a dormitory should be vigorously urged upon the attention of the general public. Looking towards the end plans for a dormitory have been prepared. If a home of this character could be provided for a part of our male students the surroundings could be improved materially and the welfare of the young men resident therein safe-guarded to better advantage than is now possible. The dining hall and the basement of such a dormitory would provide cheap, sanitary and wholesome food at a moderate income in the manner indicated is a duty the state owes to the young men to whom it must look for leadership. Most other institutions in the state are provided with dormitories, some of them of a very fine character. Those associated with private institutions are better in some respects than any which the state possesses. It would appear that the state could easily provide the funds out of its great and almost unlimited resources for the proper housing and care of any group of young men who may decide to specialize in agriculture.

### Resumé

The College closes its twelfth year of service work with a high degree of satisfaction. The storm clouds that blackened the horizon and made the outlook to the future uncertain have been swept away. The disconcerting influences that interfered for a part of the year with the work of our student body have been overcome. The boys are coming back radiantly happy and full of enthusiasm. They are anxious to get to work. They wish to complete their education as promptly as possible. The great world of experience through which they have passed has given them a better understanding and appreciation of the power and essential nature of knowledge. They realize the vast benefits which are to accrue to them and to humanity if their latent intellectual powers can be developed to the highest degree. Their war experiences have taught them the value of discipline, of self-control, of service and of leadership. They are anxious to perfect themselves along lines which will enable them to perform all the duties and obligations of a citizen to the best advantage. Hence it is not surprising that we should have the largest enrollment in our long courses in our his-



ory and that the prospects for another year in the matter of student attendance should be the brightest we have ever known.

We are gratified to be able to announce the co-educational character of our institution and to see that the women of the state have joined forces with the men. The consummation of this arrangement in its initial stages has certainly been happy and beneficial. There is no reason why it should not continue to be so in the future. We are confidently looking forward to a greater accession of women students in the immediate future, and to the creation and establishment of a bond of union and sympathy between our men and women students that will raise the standards and the ideals of our institution even above and beyond their present bounds.

Our friends throughout the year have been true and loyal and by their expressions and their support have led us to feel that they believe in us and that we could count on their aid when it was needed. The Georgia Federation of Women's Clubs have evidenced their faith in our policies by endorsing the work of our women students, and by already providing funds for furnishing rooms in our new dormitory for women.

What we need most of all is that financial support which will enable us to retain the services of our professors, increase our facilities for instruction and provide for the welfare of our students. A study of the facts and details set forth in this report seems to me will convince the people of Georgia of the wisdom of fostering and sustaining the type of education for which the College stands on a broad, liberal and efficient basis.

You have asked me from time to time to indicate in so far as possible the measure of service which the College is rendering to the state. To this end the following data and statistics have been gathered together and formulated in the table presented below. A study of this table will indicate the benefits accruing to Georgia from our efforts last year. The value may be conservatively placed at \$11,129,835.00. This table will bear the closest scrutiny. The figures have been compiled from the reports of our workers. It has taken a good deal of time and effort to correlate them. They are definite and specific with reference to the matters to which they pertain. The values have been very conservatively estimated and are distinctly below rather than above those which they might with propriety have been made to represent.

**VALUE OF THE ACTIVITIES OF THE GEORGIA STATE COL-  
LEGE OF AGRICULTURE IN PRODUCING WEALTH**

287	Long course students, increased earning capacity -----	\$ 143,500
813	Short course students, increased earning capacity -----	32,520
21,853	Boys in corn, pig, calf, wheat and other clubs	
	240,513 bushels of corn -----	360,769
	8,958 pigs valued by county agents at ----	314,825
	1,444 calves valued at -----	69,400
	14,280 bushels of wheat -----	29,560
	Other clubs as poultry, peas, potatoes, peanuts	114,022
7,556	Girls raised garden crops and canned fruit and vegetables valued at -----	272,767
2,455	Poultry club members raised 45,621 chicks and sold 1,500 dozen eggs and 230 breeders valued at -----	24,020
8,935	Women canned and brined 3,170,695 containers of fruit and vegetables and dried 326,059 pounds of products valued at ----	992,904
21,330	Women and girls conserved 1,010,531 pounds of flour -----	101,053
79,746	Demonstrators and coöperators in corn, cotton and other farm crops -----	797,460
5,803	Demonstrators and coöperators in orchard management, including pruning and spraying work -----	58,030
252,736	Hogs treated with serum @ \$8.00 -----	2,022,104
238,894	Hogs treated, miscellaneous diseases @ 50c	119,447
125,300	Other animals treated for simple diseases @ \$1	125,300
3,080	Farm buildings (plans) @ \$20.00 -----	61,600
1,747,200	Acres of land surveyed for soil work @ \$1.00	1,747,200
8,283	Breeding animals bought for demonstrators	41,415
39	Creameries, cream routes and cheese factories established -----	25,000
2,140	Silos and dipping vats constructed @ \$10.00_	21,400
936	Water and lighting systems installed @ \$10.00	9,360
1,765	Pastures improved and renovated @ \$10.00_	17,650
16,007	New gardens established @ \$10.00 -----	160,070
18,121	Demonstrators aided in the purchase of tractors, binders, gas engines, plows and other implements -----	90,605
215,922	Persons addressed in meetings @ 25c each_	53,980
213,344	Bulletins distributed @ 10c -----	21,334
	7 Issues of plate service to 140 county papers @ \$1,000 -----	7,000
60	Extension schools organized and conducted @ \$500.00 -----	30,000
238	Men and women county agents @ \$10,000 each -----	2,380,000
5,354	Farmers aided in seed selection @ \$10 each	53,540
50	Coöperative hog sales among farmers @ \$540	27,000
10	Fertilizer plots at \$500 each -----	5,000
	Results from experiments in the oil content of cotton seed (800,000 tons) @ \$1.00 -----	800,000
	Total -----	\$11,129,835

### Conclusion

As in all the years that have passed, the Chancellor of the University has been our ardent friend and warm supporter. Even when his own heart was broken and bleeding he never wavered for an instant or lost his sympathetic interest in the College. In the days when the clouds hung lowest and looked blackest he has always proven himself a loyal and true friend. I cannot express to you, and through you to him, with any degree of adequacy the rare privilege and the great inspiration which his friendship and support has meant to me. There is not a member of this staff who does not feel he has a true, faithful, loving and appreciative friend in the Chancellor of the University. Our sincere wish is that he may long be spared to preside over its destinies.

The twelfth year of our College has now become a matter of history. Hark back for a moment if you will to the humble beginnings which saw its birth and picture to yourself now the position it occupies in the state and the record of service it has achieved. In doing so I hope you may feel that the accomplishments performed in the past decade are worthy of the cause which you have attempted to serve. The institution is yours. You have made it what it is by your genius. Your faithfulness to it and your consideration of its needs constitute its greatest asset. Few men with whom I am acquainted have ever had a more generous, considerate, or efficient board to work under. With your aid and approval it has seemed that anything which was worth while could be undertaken and accomplished. The College has indeed been fortunate to have so able, capable, loyal and efficient a body of men to preside over and direct its interests. I consider myself fortunate in having been permitted to serve for so long a period of time under so able and courteous a group of gentlemen. With your enthusiasm to encourage me it has been a pleasure to serve as the Executive Officer of the Georgia State College of Agriculture and to aid in developing it in so far as possible along broad and general lines that make for the highest possible degree of culture, the broadest vision and the most capable and progressive leadership.

Thanking you for your most cordial support and sympathetic coöperation, and trusting that you may feel that the record presented justifies you in evidencing your continued approval of my efforts, I am,

Very respectfully,

ANDREW M. SOULE,  
President.

\*ADDENDUM A.

**Report of the Treasurer of the Georgia State College of Agriculture  
Year Ending June 1st, 1919.**

RECEIPTS

Cash on hand June 1, 1918-----		\$ 228.11
State of Georgia—Maintenance -----	\$ 70,000.00	
State of Georgia—Extension -----	40,000.00	
State of Georgia—Farmers' Institutes -----	2,500.00	
State of Georgia—War Emergency Building -----	10,000.00	
United States—Vocational Section S. A. T. C.-----	13,377.45	
United States—Collegiate Section S. A. T. C.-----	736.96	
Federal and State Vocational Boards-----	6,671.49	
Agricultural Education Laboratory Fees -----	802.00	
Agricultural Engineering Laboratory Fees -----	176.62	
Agricultural Chemistry Laboratory Fees -----	325.61	
Agronomy Laboratory Fees -----	335.85	
Animal Husbandry Laboratory Fees -----	308.05	
Cotton School Fees -----	295.00	
Extension Field Experiments -----	1,290.64	
Forestry Laboratory—Fees and Receipts -----	260.90	
Home Economics Laboratory Fees -----	129.00	
Horticulture—Receipts -----	3,244.90	
Horticulture Laboratory Fees-----	156.30	
Poultry Husbandry Laboratory—Fees and Receipts-----	3,361.53	
Soil Survey Laboratory Fees -----	198.34	
Veterinary Laboratory—Fees and Receipts -----	1,065.80	
Interest on Deposits -----	787.28	
Findley Fund Income -----	50.00	
Georgia Bankers' Loans -----	150.00	
Advanced Registry of Cattle -----	146.34	
Dairy -----	13,563.49	
Farm -----	7,512.98	
Serum Laboratory -----	16,987.01	
Creamery Laboratory -----	3,511.62	
Special County Agents Fund -----	1,791.14	
Contributions for scholarships, prizes, research work, demonstrations, etc. -----	9,452.86	20,891.11

Refunds represented by canceled checks and money re-  
turned -----

\$23,385.57

DISBURSEMENTS

**College Accounts:**

(Covered by state maintenance appropriation of \$70,000,  
vocational boards appropriations, fees, department  
receipts, etc.)

Agricultural Chemistry -----	\$ 546.24
Agricultural Education -----	1,199.30
Agricultural Engineering -----	767.98
Agronomy -----	837.06



im: Husbandry -----	702.21
dg and Repair -----	1,262.45
ment -----	3,749.54
oo School -----	396.66
ry -----	1,207.44
ed Stuffs -----	2,461.72
ilers -----	1,546.05
ed Experiments -----	469.11
resy -----	626.70
urs -----	1,414.61
at, light, Water -----	949.18
ne Economics -----	3,548.35
ulture -----	4,721.42
gricultural Laboratory -----	55.61
itcs -----	1,028.66
on -----	6,737.62
ra' -----	659.64
ock -----	1,880.82
neineous -----	1,186.25
ab and Stationery -----	667.02
ut: Husbandry -----	4,332.02
ulations -----	793.83
ars -----	35,121.08
os and Implements -----	667.99
aving Expenses -----	274.11
terary Laboratory -----	1,641.05
ational Education -----	9,604.93
oma's Building -----	7,001.55
<hr/>	
	\$ 98,058.20

#### tion Accounts:

aved by State Appropriation of \$40,000 for exten-  
on work, \$2,500 for farmers' institutes, and De-  
rtment Receipts).

gromy Equipment -----	\$ 800.92
gromy Traveling Expenses -----	2,071.23
am Husbandry -----	2,839.75
igent -----	3,863.59
ed Experiments -----	3,438.57
at, light, Water -----	604.96
iculture Equipment -----	355.00
iculture Traveling Expenses -----	485.00
ities -----	1,724.78
ifts -----	1,087.61
ee and Stationery -----	513.98
ers -----	21,606.46
urvey Laboratory -----	1,250.91
urvey Traveling Expenses -----	1,136.40
aving Expenses -----	1,015.96
ulations -----	248.88
ion Special -----	33.11
<hr/>	
	\$ 43,077.11

**Miscellaneous Accounts:**(Covered by donations and revolving funds of creamery  
and serum laboratory)

Advanced Cattle Registry -----	\$ 169.15
Bankers' Loans to Students -----	200.00
Ciarke County Demonstration Agent -----	41.66
Cotton Investigation -----	1,494.28
Creamery -----	3,476.15
Forestry Camp -----	22.27
Hastings Fund -----	57.10
Hastings Scholarship -----	210.00
Pasture Demonstration -----	778.40
Prizes -----	256.00
Scholarships -----	6,304.50
Serum Laboratory -----	17,969.58
Special County Agents Fund -----	65.00
Findley Fund Loans -----	30.00

Vocational Section S. A. T. C. ----- \$ 307.00  
(Covered by United States contract) 105.00

War Emergency Building ----- 158.00  
(Covered by State appropriation of \$10,000).

Refunds ----- \$1974.00  
(Represented by canceled checks and money returned). 500.00

Total Receipts ----- \$20,257.00  
Total Disbursements ----- \$23,933.00

Cash Balance June 1, 1919 ----- \$ 3,677.00  
(Representing funds for the construction of Women's Dormitory,  
against which obligations have already been incurred for ma-  
terials, supplies and labor).

**FEDERAL SMITH-LEVER ACCOUNT****Receipts**

United States of America ----- \$ 98,107.14  
Refunds to various accounts and canceled checks ----- 393.56

**Disbursements**

Salaries ----- \$ 72,467.56  
Labor ----- 34.60  
Stationery and Printing ----- 271.20  
Postage, Telegraph, Freight and Express ----- 256.62  
Supplies ----- 682.66  
Tools and Machinery ----- 208.60  
Furniture and Fixtures ----- 343.92  
Scientific Apparatus ----- 13.50  
Traveling Expenses ----- 17,586.11

Expenditures represented by refunds and canceled checks ----- \$ 91,864.77  
393.56

Cash Balance June 1, 1919 ----- \$ 9,258.00  
\$ 942.00

## STATE SMITH-LEVER ACCOUNT

## Receipts

of Georgia -----	\$ 73,500.00	
to various accounts and canceled checks-----	1,246.83	
		\$ 74,746.83

## Disbursements

-----	\$ 32,897.99	
-----	1,755.70	
isions -----	5,955.42	
ory and Printing -----	3,113.14	
g, Telegraph, Freight and Express -----	1,398.50	
-----	2,591.99	
-----	2.50	
nd Machinery -----	248.45	
ire and Fixtures -----	2,448.01	
ic Apparatus -----	396.85	
g Expenses -----	20,095.49	
ent -----	1.50	
		\$ 70,905.54
atures represented by refunds and canceled checks	1,246.83	
		\$ 72,152.37

Balance June 1, 1919 ----- \$ 2,594.46

(The State appropriation covering the fiscal year July 1, 1918—July 1, 1919, was \$109.14, of which \$73,500.00 has been received and the remaining \$14,609.14 paid by the State before the end of the fiscal year on July 1st).

Under the terms and provisions of the Smith-Lever Extension Act, all funds from State or Federal sources must be spent under definitely approved agreements between the Trustees of the Georgia State College of Agriculture and the United States Secretary of Agriculture. The expenditures under those from July 1, 1918, to June 1, 1919, are given in this report. These figures correspond with the report to be made to the Federal Government, as its year runs from July 1st to July 1st and the report to be made to the Federal Government July 1, 1919, will contain in addition to these figures the business transacting June, 1919.

## Federal Project Disbursements

3—County Agents -----	\$ 46,875.49
4—Home Economics -----	44,989.28
	\$ 91,864.77
Expenditures represented by refunds or canceled checks	393.56
Total Federal disbursements -----	\$ 92,258.33

## State Project Disbursements

1—Administration -----	\$ 20,930.07
2—Publications -----	5,955.42
5—Boys' Club Work -----	1,234.11
6—Movable Schools -----	5,045.65
7—Farmers' Field Meetings -----	2,988.74
8—Educational Exhibits at Agricultural Fairs -----	2,688.86
9—Live Stock -----	7,346.58
10—Boys' Pig Clubs -----	1,110.28
11—Girls' Poultry Clubs -----	376.52
12—Agronomy and Farm Engineering -----	6,439.64

Project 13—Dairy -----	4,5
Project 14—Forestry -----	1,6
Project 15—Marketing -----	3,2
Project 16—Horticulture -----	3,2
Project 17—Engineering -----	2,4
Project 18—Plant Pathology -----	8
Project 19—Bee Keeping -----	7

Expenditures represented by refunds or canceled checks_	\$ 70,9
	1,2

Total State Disbursements -----	\$ 72,1
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### AUDITOR'S CERTIFICATE.

June 11, 1919

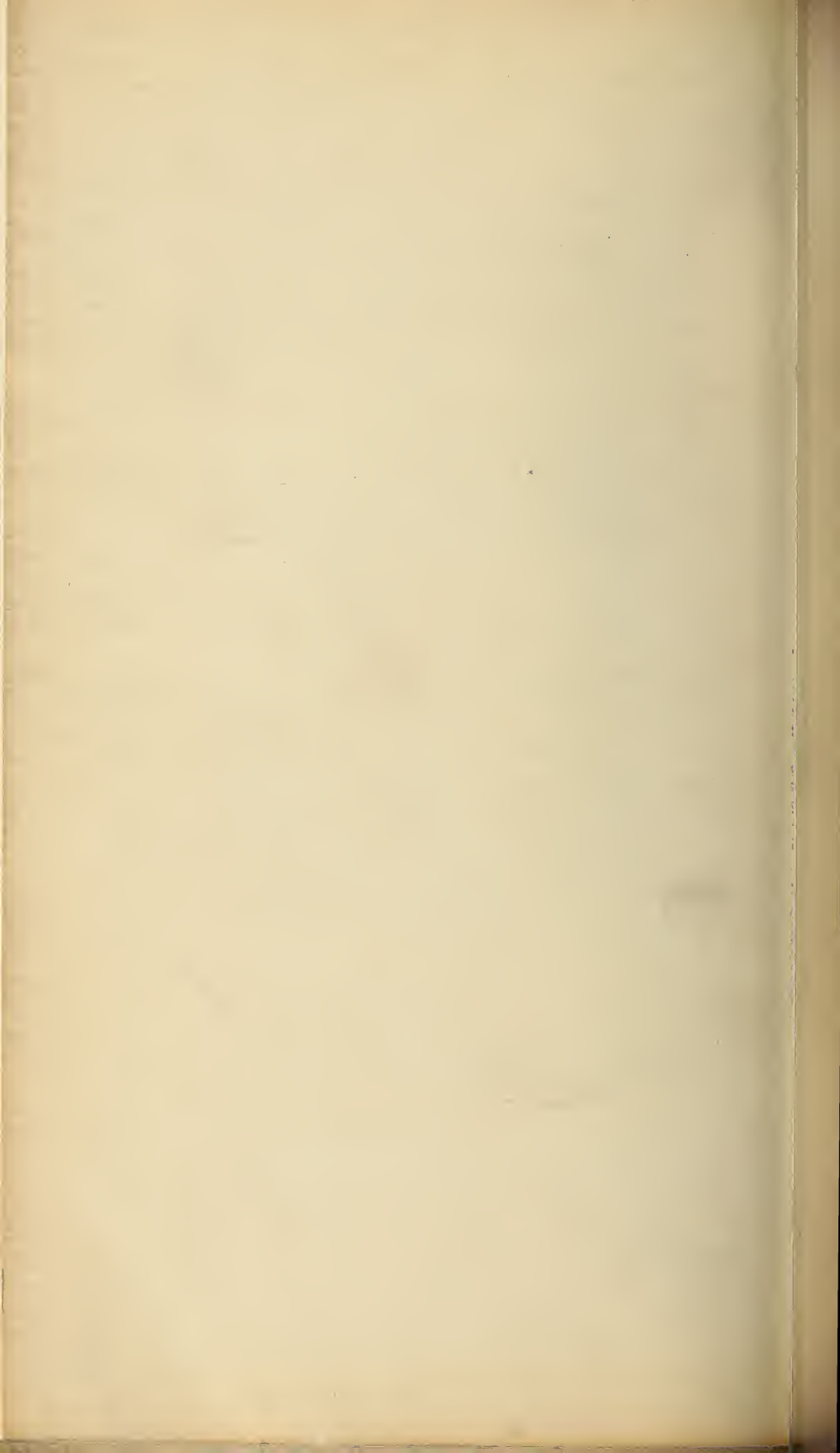
I have examined the books of T. W. Reed, Treasurer of the Georgia State College of Agriculture, including those of the Smith-Lever Fund, for the fiscal year June 1, 1918-June 1, 1919, and find them correct and all money properly accounted for

(Signed) J. W. STEPHENS,  
State School Auditor

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Vol. VIII. No. 35

JUNE, 1920

Bulletin 213

# Bulletin

## Georgia State College of Agriculture



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## Annual Report 1919-1920

Andrew M. Soule, President

Entered as second-class matter December 21, 1912, at the post office at Athens, Georgia, under the Act of August 24, 1912. Issued monthly by the College.

# Georgia State College of Agriculture

## University of Georgia, Athens, Ga.

### ADMINISTRATIVE, TECHNICAL AND EXTENSION STAFF

ANDREW McNAIRN SOULE	President
JOHN RICHARD FAIN	Professor of Agronomy
MILTON PRESTON JARNAGIN	Professor of Animal Husbandry
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JAMES BERTHOLD BERRY	Professor of Plant Pathology and Forestry
JOHN TAYLOR WHEELER	Professor of Agricultural Education
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THOMAS WALTER REED	Registrar
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†*DAVID DANIEL LONG	Soil Expert in State Survey
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†*JOHN KYGRESS GILES	State Supervisor of Agricultural Clubs
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ROBERT DANIEL MALTBY	State Supervisor of Vocational Agriculture
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*EDISON COLLINS WESTBROOK	Tobacco Specialist
†*ROSS McKINNEY GRIDLEY	Live Stock Production Specialist
†*WILLIAM HARRY HOWELL	Extension Dairy Husbandman
*PAUL TABOR	Field Crop Specialist
*HENRY TOWNS MADDUX	Editor
†*LOIS PAULINE DOWDLE	Asst. State Supr. Home Demonstration Work
†*MRS. BESSIE STANLEY WOOD	Assistant State Supervisor Home Demonstration Work
JULIUS EUGENE SEVERIN	Associate Professor of Veterinary Medicine
WALTER CLINTON BURKHART	Associate Professor of Veterinary Medicine
LAFAYETTE MILES SHEFFER	Associate Professor of Agricultural Education
†*JAMES GRANBURY OLIVER	Assistant State Supervisor County Agents
†*WILLIAM BRADFORD	Assistant State Supervisor Agricultural Clubs
†*GEORGE VIVIAN CUNNINGHAM	Assistant State Supervisor County Agents
†*JAMES VERNON PHILLIPS	Senior Drainage Engineer
JAMES HERBERT WOOD	Associate Professor of Poultry Husbandry
NELLIE MAY REESE	Librarian
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*HARLOW WILLIAMSON HARVEY	Specialist in Landscape Gardening
*WILLIAM OLIN COLLINS	Associate Professor of Soil Chemistry
*GUY RUDOLPH JONES	Field Agent in Agricultural Engineering
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ROSALIE VIRGINIA RATHBONE	Associate Professor of Textiles and Clothing
ERNA ELIZABETH PROCTOR	Associate Professor of Foods and Cookery
BESSIE BOGGESS	Associate Professor of Institutional Economics
*LAURA BLACKSHEAR	Illustrator
*FRANK WARD	Cotton Specialist
*LESLIE VINCENT DAVIS	Supervisor of Fertilizer Investigation
†*DeFOREST HUNGERFORD	Scientific Assistant in Farm Management
†*CHARLES EDWARD KELLOGG	Beef Cattle Specialist
†*CARL WALLACE	Field Agent in Swine Husbandry
†*LEO HARTLAND MARLATT	Field Agent in Cheese Production
*WILLIAM EARL BROACH	Field Agent in Agricultural Engineering
CECIL NORTON WILDER	Associate Professor of Agricultural Chemistry
WILLIAM EDWARD GARNETT	Associate Prof. of Agricultural Education
ARTHUR STEWART BUSSEY	Scientific Assistant in Animal Husbandry
PHARES OBADIAH VANATTER	Superintendent of Field Experiments
AMBROSE PENN WINSTON	Foreman of College Farm
CHARLES BOWDEN SWEET	Foreman of Greenhouse and Grounds
†*HERMAN VICTOR PERSELLS	Hog Cholera Specialist
NEAL DOW PEACOCK	Instructor in Horticulture
*ALFRED MELBA THORNTON	Assistant Editor
*GEORGE HENRY FROR	Field Agent in Horticulture
*HADEN MAYO McKAY	Field Agent in Horticulture
†*SAMUEL EDWIN McLENDON	Specialist in Stored Grain Insects
*MAUDE SMITH	Field Agent in Poultry Husbandry
*WYATT ARNTON CLEGG	Associate Professor of Agricultural Engineering
*EMORY DeWITT ALEXANDER	Associate Professor of Agronomy
*CHARLES WATSON MOBLEY	Adjunct Professor of Agricultural Engineering
*JULIAN HOWELL MILLER	Associate Professor of Horticulture
*GEORGE PAUL SAYE	Associate Professor of Animal Husbandry
HENRY NORMAN KALDAHL	Associate Professor of Animal Husbandry
LOUIS H. WRIGHT	Associate Professor of Veterinary Medicine
HENRY COSBY LYON	Student Assistant
*PAULINE McKINLEY	Instructor in Rehabilitation Section
*MAY TREANOR	Instructor in Rehabilitation Section

\* In Extension Service.

† In Co-operation with U. S. D. A.

‡ On leave of absence in army service.

For names of district and county agents see Extension Staff.



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## Report of the President, Georgia State College of Agriculture and the Mechanic Arts

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TO THE HONORABLE BOARD OF TRUSTEES

Of the Georgia State College of Agriculture.

Gentlemen:

In accordance with your instructions I submit for your information my thirteenth annual report of the work accomplished by the Georgia State College of Agriculture and the Mechanic Arts for the collegiate year 1919-1920.

During the year we have had to meet and deal with many of the well known psychological reactions which usually appear to follow a period of war. The well ordered lives of our people and the ideas and thoughts by which they were actuated have been sadly disrupted. Unrest appears to be the dominant note in our national life. Naturally, where this condition prevails there is bound to be some dissatisfaction and unhappiness, and a constant tendency on the part of people to change their avocation in the hope of finding those Elysian fields where the "burdened may find solace and the weary may find rest." In spite of the turmoil and confusion and the agitation and counter-agitation which has gone on, we have had a remarkably prosperous and successful year. Our student body has shown a wonderful increase in numbers, a fine aptitude for work and a zeal and success in adjusting themselves to the existing conditions which are worthy of the highest commendation. It has been a real inspiration to work with them throughout the entire session.

Theoretically, the war ceased with the signing of the armistice on November 11, 1918. Practically, we have had to meet and deal with war conditions ever since that time. The dislocation which the world strife brought to our industries has been further aggravated by the unrelenting struggle which has gone forward between labor and capital. Thus, instead of recuperating and gathering together all the forces of the nation into a constructive unity of effort, we have further dissipated and impaired our reserve stores of raw materials and manufactured goods. As a result, there has been a marked increase in the cost of living which is affecting the temper and disposition of our people materially.

### FARM WORKERS NEEDED

Existing conditions are lowering our standard of living because the purchasing power of the dollar has so greatly depreciated

and on account of the crowding into towns and cities of a part of our population which, under normal conditions, would have remained in the open country. Rural workers, observing the proposed short hours of labor and the high wages paid by industries have irrationally concluded that they would materially better their condition by moving into the towns and cities already under-supplied with housing facilities. Thus, there is a marked tendency to minimize agricultural production and to further raise the costs of foods by decreasing the supply. Wages, in so far as our agriculture is concerned, have almost reached prohibitive figures. The supply of workers is much below the requirements of the situation. It has been suggested by competent statisticians that we need two million more workers on our farms than are available at this time, if we are to feed our people adequately at prices which will give the producer a reasonable profit and which the consumer can afford to pay.

It is evident to those who have studied the situation that the area planted to crops is smaller than usual and the prospects of a good yield on account of unfavorable weather conditions are not now encouraging. Just how shall we undertake to meet the situation which has arisen is therefore a question of national and even international concern, for America up to this time has been looked upon as a sort of food storage house for the world. The first and most important thing to do is to go to work and to stop bickering and arguing over matters of insignificance as compared with the real issues at stake.

The second thing is to realize that there has been a wonderful let-down in our enthusiasm which we must make an earnest effort to recover. Thousands of individuals who were spurred on to activity by war conditions have lost their interest and zest in production. The city gardener is largely a thing of the past and the retired farmer who was active in aiding the country when faced by a great crisis is, for the most part, again devoting himself to rest and leisure. People who made money out of their crops last year do not seem to be able to realize as yet that it will not last forever; and so they are not pushing the operation of the farms now with the vigor which characterized them in previous years.

### FARMER NOT A PROFITEER

There is also dissatisfaction on the part of the landowner with the prices he has received for his crops. There is a general impression in the public mind that the farmer should be classed as a profiteer. This is a gross and outrageous error, for while the farmer has undoubtedly had favorable prices during recent times, he was the last to benefit by the increase, and he will be the first to suffer by the recession of prices. In any event, he has not been able to fix his profits above the cost of production on the grossly

unjust and unfair scale which was followed by many industries and individuals who have profiteered in a scandalous manner at the expense of the public.

The farmer has about concluded that it is not incumbent upon him longer to feed the public without just reward for his effort. The position he assumed is eminently fair and just. In many instances, those cultivating the soil have raised and sold their crops at prices which did not provide a decent living for their families. In many instances, they have failed to make a profit. Granting that under certain circumstances a part of the trouble was due to their own limitations, what other industry would undertake to serve the essential needs of the nation without a profit?

From my point of view, the time has arrived when the farmer is entitled to the same treatment as the railroads, for instance, which are guaranteed by the government a standard return on their investments. Whenever we apply the principles of justice, equity and fairness to the problems of the farm, we will be able to correct in large measure the conditions by which we are now confronted. Until then, we must suffer the ills of the present, and they may even assume in so far as the high cost of living is concerned a more aggravated form. Even under existing conditions, I hold that crop production could be stimulated and increased materially if the landowner and operator felt that he could find a market for his crops which would afford him a fair margin of profit.

### THE FARMER MUST LIVE

It is true that there will be an apparent deficiency in food supplies next fall that will cause much suffering and unhappiness throughout the country. There are those who believe that the farmer is not doing his duty. There are those who wish to berate him all the time and to charge him with many crimes of which he is not guilty. The sooner the people living in the towns and cities realize the right of the farmer to live, to thrive and to make an increment on his labor, the better off they will be. Decrying the other fellow gets us nowhere, and most of the statements relative to the profits made by farmers have been grossly exaggerated and are not based on facts which can be satisfactorily substantiated. A new era has dawned upon our agriculture, if you please. The "worm has turned," and those who have danced so long and lived in luxury at the expense of the farmer must make up their minds to "pay the fiddler" in the future. The sooner they do this, the better it will be and the more rapidly will the conditions by which we are now confronted adjust themselves.



## REMARKABLE PRODUCTION

Under the stress of war conditions, Georgia made a phenomenal record along agricultural lines. In 1917, a well defined plan of crop production was worked out. In that year, the output of our farms reached the surprising figure of \$548,544,000.00. In 1918, an enlarged program was presented, and our farmers responded by raising \$590,292,000.00 worth of farm crops. The goal for 1919 was set at \$625,000,000.00 because of the need of supplying our brothers across the water with some of the food they needed and which they could not secure from any other source. This goal was also attained. In addition thereto, we provided ourselves and our neighbors with \$125,000,000.00 worth of animal products. Thus, the total output of our crops and animals last year reached the astonishing figure of \$750,000,000.00.

It cannot be said that seasonal conditions were especially favorable, that labor or fertilizers were abundant or easy to obtain. We did not have any surplus of agricultural implements or live stock with which to operate our lands. In spite of that fact, we presented to the world new wealth aggregating three-fourths of a billion dollars in value. We did this through the cultivation in only a semi-intensive fashion of one-third of our landed area.

I respectfully direct your attention to the fact, therefore, that Georgia now stands sixth in agricultural production and seventeenth in animal production and that she is rapidly on the way to becoming a billion dollar state. We can certainly attain this position whenever conditions warrant it. This is a fact of such tremendous economic and potential importance that I wish to emphasize it as strongly as possible because I think comparatively few of our people yet realize or understand the great possibilities which lie ahead in Georgia through the institution and organization of better methods of farm practice. In this connection, I wish to ask that if one-third of our cultivated lands will enable us to raise crops and animals worth \$750,000,000.00, what may we anticipate in the future if we double, as we easily can, yields per acre or bring under the plow twice as much land as we are now cultivating?

Georgia will eventually become a two or even a three billion dollar state agriculturally. To accomplish this, will call for the training and sending forth of a great army of men and women so that effective leadership and direction may be given to the maintenance and development of our vast and far-reaching farming enterprises on a safe and sane basis. It is self-evident that there are few lines of industry, of research, or of social effort, which offer a more alluring opportunity to the men and women of this state than that of agriculture and the home-making industries.



## EDUCATION NEEDED

From this review of the situation, the future of our agriculture may appear to be unpromising to many. The progress we make will be determined by the degree of educational advancement attained in the next few years. The reorganization of our agriculture is inevitable. We must do this to keep step with the progress of our civilization and the demand of the world for raw materials and cheap though profitably raised foods.

Success will rest most largely upon the shoulders of those who in the next decade purchase and use the most improved types of implements. Power-farming is now about to succeed what in the halcyon days of the west was termed "bonanza" farming. Implements of large size and of more or less complicated mechanism are destined to displace much of the labor previously employed. This is as it should be in an age of scientific advancement and development such as the one in which we live. Through the use of implements, agriculture may be made a more certain and desirable vocation. Much of the drudgery and labor can be removed from it.

With a minimum of labor of high intelligence, greatly increased areas of land may be brought under the plow, rotation systems established and a part of the uncertainty which makes many people regard agriculture as a semi-hazardous business eliminated. Through the application of scientific knowledge to the practice of the farm, a part of the frightful waste of effort now witnessed will be prevented.

Plant diseases and insect pests will be overcome and brought under a desirable measure of control. Yields will be greatly increased through the application of the principles of seed selection and plant breeding. Better types of animals will be evolved, and types of both plants and animals better adapted to our soils and climatic conditions will be bred. When this is accomplished through the leadership of capable experts, coöperation can be made a reality instead of a dream and the business of the farm adjusted and put on a thoroughly constructive basis.

Through coöperative efforts, the problem of marketing crops will be achieved and thus the farmer will come into his own, and will be enabled to make a profitable dividend each year on his operations. When this is done, the future of the open country will be assured, and our key industry established on a basis which cannot be shaken. We will have solved the problem of maintaining an adequate proportion of our population in the country to supply the needs of urban dwellers with both food and raw materials. This is a national problem of the gravest concern. It is recognized by all students of our present economic situation.

## EVERYONE CONCERNED

In spite of the indifference evidenced in some quarters, everyone is intimately concerned with the progress of our agriculture because it constitutes the chief source from which we obtain raw materials and it is the only avenue from which we derive the sustenance essential to human beings. The nutrition of our people and hence their virility is dependent upon the character and advancement of our agricultural practice.

The ability of our manufacturing industries to supply the needs of our population effectively and at a moderate cost is measured by the efficiency of the production attained on our farms. Unless we have an abundance of raw materials, we cannot compete successfully in the markets of the world with the cheap labor of foreign countries where the standards of living are much below those prevailing in this country.

Hence, our foreign policy in the future will be determined by the skill and success attending the efforts of those who till our soils. Moreover, the future destiny of the nation is to be measured largely by their effort, for as the cost of foods increases beyond a certain point, the producers of other countries will send their surplus to our shores and we will eventually become a nation dependent upon outside sources of supply. This, it seems to me, would be the most unfortunate thing which could happen to our country. Yet, I believe these deductions are sound and will stand the acid test of time.

## ELIMINATE WASTE

So, it is evident that the time has come in our history when we must center, in fairness and justice to the welfare of our country, a greater part of our energy and effort on the solution of the problems of the farm. We must endow agricultural education more liberally and thereby develop the leaders necessary to bring about the conditions I have endeavored to portray as essential to our national welfare.

The elimination of waste is one of the problems on which we should concentrate our effort with an intensity of purpose which has not characterized our actions in the past. A careful and conservative survey of the situation indicates, for instance, that our losses last year on sweet potatoes, corn, cotton, tobacco and live stock aggregated the huge sum of more than one hundred million dollars. In other words, we developed crops and animals worth this huge sum. The values thus represented existed in actual, tangible form. We could see and feel and handle them, and yet through carelessness, indifference, or lack of business capacity we permitted this marvelous stream of gold to pass unchecked through

our hands. So it was lost forever to the men and women of Georgia.

If it could have been saved and put into educational avenues, what a benefit it would have represented; and how effectively could we have changed the whole face and condition of our farms! The interesting part of this statement lies in the fact that at least two-thirds of this wealth could have been saved without the expenditure of any very great sum of money. The means by which it could have been accomplished are already well known and their practicability has been clearly established.

Why does this waste go on? Because its nature and extent is not fully appreciated or understood. The amount we are spending for education at this time is a mere drop in the bucket. We are spending in the state of Georgia approximately ten million dollars for education through private and public agencies. This includes money set aside for common schools and for higher education as well.

It represents but one-tenth of the annual losses occurring to our crops and live stock each year. The correction of this condition is an educational problem, a truth-disseminating undertaking. I present these figures to convince those who are doubtful about the virtues and values of vocational education and who are wondering if we can afford to endow this type of training on a basis commensurate with our needs. As long as the aggregate waste from a single source reaches such a great and staggering figure, those who oppose education stand condemned before the bar of justice and without a brief on which to base their case.

### NEED COMMUNITY ORGANIZATIONS

In this connection I wish to emphasize the necessity of community organizations and the adoption of community programs of work. Agriculture will become attractive and remain so to an ever-enlarging proportion of our population just as it is shown to be definitely profitable, and to be a decidedly attractive and desirable vocation.

To make life in the open country worth-while, we must have community centers organized around a consolidated school. This affords not only educational opportunities essential in this day and generation, but it provides a social atmosphere and permits of the introduction of forms of entertainment basic to the proper education of the people of the community and which will at the same time afford them the necessary degree of relaxation. In association with the schools there should be test plats and gardens in which the principles of the schoolroom may be demonstrated and applied.

In every such community center, there should be a common storage warehouse, a farm loan bank, or its equivalent, a sweet potato storage warehouse, a tobacco barn or warehouse, a farmers' exchange, a coöperative store, a creamery or cheese factory, and if the conditions warrant it, a cold storage plant and a community abattoir. To these may be added a canning factory, a poultry depot, and such other agencies as the life of the community may make worth-while. It will not take unlimited capital to finance enterprises of this character, nor is this plan an idealistic dream because parts of it and in some places practically all of it has been put into successful practice.

Such an arrangement provides the farmer with just and fair prices for the products of his toil and energy. It enables him to make his crops successfully and to supply the needs of urban centers satisfactorily throughout the year. The glutting of the market at certain seasons is overcome. It does not interfere in any sense with business, nor does it militate against the interests of the merchants and capitalists. They still find safe avenues of investment for their funds as they participate in the general prosperity and success of the community. This is the end we must strive to attain if we would place our agriculture on a worth-while basis and make it attractive to men and women of brains and capacity.

### ENROLLMENT OF STUDENTS

The enrollment of students has been very gratifying. An analysis of the registration is presented below for your information. It appears that there were 529 men and women in attendance in the long courses and 518 in the short courses. Excluding ten names counted twice, this makes a grand total of 1,037 individuals who received instruction on the campus at Athens during the collegiate year now closing.

The nature and character of the instruction offered indicate the large field of service which the institution is expected to cover. It is pleasing to note the consistent growth which has taken place in the degree courses in agriculture. Much interest is being evidenced in the home economics course, while the veterinary course is just now beginning to receive the consideration its importance merits.

Students entering our degree courses have been required to present 14 units up to the present time. Beginning with September, however, they will be required to present 15 units. The College is keeping fully abreast of the times and raising its standards as rapidly as possible so as to insure the national recognition of its graduates.



## SUMMARY OF REGISTRATION

### Long Courses

Master of Science of Agriculture.....	3
Bachelor of Science of Agriculture.....	195
Bachelor of Science of Home Economics.....	28
Doctor of Veterinary Medicine.....	9
Irregular Students .....	16
Special Students .....	10
One-Year Course in Agriculture.....	18
Rehabilitation .....	250
<b>Total in Long Courses.....</b>	<b>529</b>

### Short Courses

Collegiate Summer Course.....	62
Cotton Grading School.....	31
Home Economics, Three Months Course.....	53
Boll Weevil School.....	160
Short Course of Boys' Clubs.....	104
Short Course of Girls' Clubs.....	108
<b>Total in Short Courses.....</b>	<b>518</b>
<b>Total Long and Short Courses.....</b>	<b>1,047</b>
Counted Twice .....	10

**GRAND TOTAL .....** **1,037**

Two hundred and fifty of the long course students were in the rehabilitation section. These men are being retrained along vocational lines. They represent wounded soldiers sent to us through the agency of the Federal Board for Vocational Education. It has been both a pleasure and a privilege to have these men enrolled in our institution. The vocational officers in charge of this work for the Federal Government have credited us with handling these men on a thoroughly satisfactory basis.

They have applied themselves diligently and have made excellent progress. Many of them will soon be able to either return to their own farms or to take up lines of vocational service work in which they have specialized with both profit and advantage. It is doubtful if the college has performed any more important or desirable service work since its inception than that of aiding the men who fought so valiantly to uphold the honor and traditions of America to again re-establish themselves acceptably in civil walks of life.

Our long courses showed an increase of 242 over the previous year, which is equivalent to a gain of 84 per cent. This, coming on

top of the 73 per cent increase last year, indicates the rapidity with which the institution has grown and certainly is an evidence of the faith and appreciation which the people of the state have in the character of instruction which it represents.

You will observe that 518 were enrolled in the short courses, some of which continued for a period of three months. In fact, 146 of this number were on the campus for a period of more than six weeks. Every effort is being made to expand and vary the courses of instruction so as to serve and benefit the welfare of that large percentage of the population which still lives in our smaller towns and cities and are dependent for their sustenance upon the activities of the open country.

The total registration, since the organization of the College, in the long courses has now reached 2,442 and in the short courses 4,034. This makes the grand total of individuals instructed at Athens in the past thirteen years 6,476. There were 67 enrolled in the long courses in 1908, and of these 23 were working for degrees. The senior class now numbers 38, which is not quite twice as many as were studying for degrees thirteen years ago.

#### GROWTH IN ATTENDANCE

Year	Long Courses	Short Courses	Total
1908	67	104	171
1909	62	124	186
1910	98	100	198
1911	115	110	225
1912	161	66	227
1913	185	165	350
1914	182	284	466
1915	191	350	541
1916	200	219	419
1917	209	543	752
1918	166	638	804
1919	287	813	1,100
1920	529	518	1,037
Total	2,442	4,034	6,476

#### BOLL WEEVIL SCHOOL

The boll weevil school held last January was one of the most interesting experiments in education we have ever made. The character of instruction was changed largely from that of class lectures to actual field demonstrations. The work of the machines for applying calcium arsenate was actually shown and those in attendance given an opportunity to familiarize themselves with the

equipment needed and the methods of handling it so as to secure the most effective results in actual practice.

There were judging contests to demonstrate the best points in selection with hogs and cattle. Autopsies calculated to show the individuals how to recognize hog cholera and then treat it successfully were made. Tractors and gas engines were displayed and studied. Sweet potatoes were sorted out and prepared for the market. Grains were treated to protect them from weevil damage, and also to free them from fungous diseases. It was an intensified period of concentrated study and demonstration in which scientific principles were illustrated and applied and not taught by theory as in the past. It proved to be such an attractive occasion that those in attendance passed resolutions asking that another course be put on in August. Agreeable to this request, arrangements are being made to that end.

The fact that 160 substantial farmers attended the boll weevil school from every part of Georgia is an evidence of a desire on the part of the people to secure concrete knowledge and also their belief in the ability of this institution to furnish them with the fundamental information needed to re-establish our agriculture and put it on a plane where damage done by the boll weevil can be minimized.

This is to be accomplished, naturally, through the institution of new types of farm practice and by supplying the farmer with the definite information he must have and put into practice in order to grow cotton profitably and successfully in the face of the boll weevil invasion. That this sort of work is eminently worth-while is evidenced by the fact that the weevil did \$40,000,000.00 worth of damage in Georgia last year. Thus, any effort which can be made to counteract this loss must be regarded as a movement in the right direction.

### **THE CAVALRY UNIT AND MOTOR TRANSPORT CORPS**

During the year a cavalry unit and a motor transport corps of the Reserve Officers' Training Corps have been established. This has been made possible through the wise initiative of your honorable body. It has cost several thousand dollars to provide a satisfactory shed for the transport division and a barn for the cavalry horses. It has been money well invested, however, as the boys taking up the motor transport work familiarize themselves thoroughly with the operation of all types of motor driven cars and trucks. This is both important and essential information for any man to possess, and will stand him in good stead upon graduation.

The tractor is rapidly becoming an important factor in the work of our farms, and it is necessary that young men living in the

country should know how to operate, repair and handle both pleasure cars and trucks. The cost of this instruction is defrayed by the War Department which assigns army officers to take charge of this unit.

The men specializing in the cavalry unit have an opportunity to acquire an intimate knowledge of horses and the best methods of feeding, grooming, handling and managing them under a great variety of conditions. I am satisfied that those entering this unit will be inspired to promote horse breeding operations on a scale which will help to supply our needs in the future. The assignment of the cavalry unit to the college also affords us excellent material for stock judging purposes, and it has interested our entire student body in animal life. This is a very desirable end to attain in view of the great turning movement toward animal husbandry which is being witnessed in our state and throughout the South as a result of the boll weevil invasion.

Young men completing the motor transport or the cavalry work of the Reserve Officers' Training Corps satisfactorily may become Second Lieutenants in the United States Army for one year and may remain in the army by standing examination. The subvention extended to men who take up military work of this character now amounts during the four-year college course to approximately \$450.00. Thus, the Government is aiding many a poor boy to secure his college training at a moderate cost. While taking his under-graduate work, he is also preparing himself as an officer, thus saving a great deal of time and supplying the nation with a reserve of trained leaders to meet any emergency which the aggression of a foreign nation might force upon us.

The work being done here in our motor and cavalry corps was highly commended by officers of the War Department who recently inspected our students, plant and equipment. You will, no doubt, be gratified to know that this is the only institution in the South to which a cavalry unit has been assigned.

### COURSES FOR WOMEN

The records of the War Department appear to indicate that 33½ per cent of the men called in the draft were not prepared for service by reason of physical defects, a great majority of which could have been corrected in childhood. It is natural to suppose that there are as many women defective from the same causes. Think what a waste in human energy and what unhappiness this represents! Reflect for a moment on the large number of our people that are denied the attainment of the success in life they might have won if they had possessed healthy bodies, and, as a result, great virility and intensity of purpose. Consider for a mo-



ment the burden which the nation has to bear as a result of such defects in the physical well-being of a considerable percentage of our population.

Turn from this aspect of the situation and let us study the causes which have produced these results. The doctors tell us that a great many of the defects were caused from some form of malnutrition. In other words, it was improper feeding. From this chronic digestive troubles develop, and various organs of the body are permanently affected and their normal functions deranged.

Can it be in this great nation of ours where food of the most varied and costly types has up to this time been so abundant and relatively cheap that one of the chief causes of our ills is attributable to improper nutrition? Such seems to be the case, and, in that event, we should hasten to correct this situation with all possible speed. How is this to be brought about? Primarily, through the wise and judicious training of the men and women of our country in the values of different foods and in their proper preparation.

There are those who imagine that home economics represents cookery and nothing else. In this they are much mistaken. The home economics leader to be worth-while must possess broad and fundamental knowledge. She must have wide sympathies, a fine imagination and a clear vision. She must not only be trained in the fundamental sciences, but she must possess a thorough knowledge of the composition, uses and functions of food. She must be a dietary expert, a well-versed economist. An eminent knowledge of food chemistry is essential, and she should be trained in sanitation and home nursing.

These are the things she must possess to be a capable and efficient mother, a wise teacher and leader of the people, an effective force in correcting the conditions by which we are now confronted. It is this type of women that we are endeavoring to train and develop and send out in ever-increasing numbers into the state of Georgia to perform the essential and necessary type of service in the interest of the public welfare.

## TWELVE WOMEN GRADUATE

It is pleasing to record that there is a rapid growth of interest in our home economics division. Twenty-eight students are regularly enrolled therein and twelve will receive the degree of Bachelor of Science of Home Economics this year. This will be the first class of its kind to graduate from the University of Georgia and will represent one of the largest groups of women which has ever received this degree in any southern institution. It represents the fulfillment of the determination of the Board to inaugurate co-

education and extend to the women the same rights and privileges to train themselves for effective service as the men have so long enjoyed.

In addition, there are fifty-three women who are preparing themselves by special courses of a minimum of three months in length to do better work as county agents and there were 106 girls enrolled in the canning club courses held at the college last summer. This does not include the hundreds of women who attended the Normal School at Valdosta in coöperation with the local chapters of the federation of women's clubs and through the agency of the county and district home economics short courses held throughout the state.

All the arguments advanced last year as to the necessity of instituting degree courses for women and establishing co-education at this institution still hold good. The wisdom of the Board in reaching this conclusion has been amply justified year after year. We cannot hasten the progress of this movement too rapidly because it would seem from statistics available that there are between 270,000 and 300,000 suffering from some form of malnutrition.

Reputable doctors examining 163 children from one school recently found 160 of them suffering from some defects which would quite readily yield to treatment. These facts are sufficient to amply justify the course of this institution and demonstrate more eloquently than words can portray the grave character of the situation by which we are confronted and the necessity of our making haste to correct this condition in the interest of fairness and justice to the rising generation.

### **DORMITORIES NEEDED FOR MEN**

The interests of the student body have been as well safe-guarded and promoted as conditions would permit. The housing situation constitutes one of our most essential and difficult problems. Our boys find it difficult to secure adequate rooming facilities and the charges assessed against them constitute a heavy burden. We have lost a considerable number of students by reason of their inability to pay the prices demanded for rooms at the present time or to find suitable living quarters. This constitutes a situation of the gravest character, and it is one which should engage the immediate consideration of the Board of Trustees.

The University as a whole has rooms for about 250 students. The enrollment this year exclusive of the short courses approximated 1,300. No provision has been made for dormitories for male students since 1901. All opinions to the contrary, the average

student in our college is relatively a poor boy. The present situation is, therefore, debarring many of the finest young men in Georgia from securing an education.

This represents a condition that does the state an injustice and which should be corrected at once. In order that the interests of the male students may be most effectively safe-guarded and taken care of, it is necessary that funds be provided immediately for the erection of a dormitory capable of housing and caring for not less than 250 men.

### STUDENT ACTIVITIES

Our students, as in former years, are participating in all phases of the work of the University. The president of the Y. M. C. A. is a member of our senior class, and the president of the Y. W. C. A. is a member of the junior class. There is an opinion in the minds of some that the religious life of the student is not encouraged or looked after. These conclusions are not founded on fact, and criticisms of this character only emanate from those who have selfish ends to serve.

The students have done good work throughout the year. They have been obedient, respectful and energetic. The condition of our buildings and grounds evidence the fact that they have coöperated effectively with the executive office in preserving our equipment and minimizing the defacement of the public property.

Our institution has grown to such an extent that we daily have a considerable number of visitors. Some of them have not been trained as carefully as our own students and do not appreciate the value of tidiness. Occasionally, some depredations committed by this class of people are unfairly charged to our students. I wish to make this statement on behalf of the men and women who support and help in handling the affairs of the college throughout the year.

Their coöperation has been an inspiration. The discipline such as we find it necessary to have has been left entirely in the hands of the student body, and they have discharged the trust assigned to them with fairness, capability and and distinction. We have endeavored to build up a set of traditions in the minds of the student body that we would keep the grounds and buildings in a condition that would attract the attention and win the endorsement of all. This seems to have been largely attained through the coöperation of the entire student body.

The Agricultural Quarterly has had a good year. This magazine is handled entirely by the student body, and it is a credit to the editors and to the institution. It now seems safely launched on

the road to permanent success, and I feel that it will continue in the future to reflect honor on the institution and the student body which supports and edits it. In this connection, I wish to say that our women students are doing their full share toward making this magazine a success.

Our honorary fraternity, the Alpha Zeta, has had a satisfactory year. The women of the home economics division are now organizing a society of a somewhat similar nature for themselves which I think is a step in the right direction, and will certainly be helpful in creating results in the development of an organization to which election will be based primarily on service and scholarship.

During the year several social gatherings have been held in the interests of the student body. These have been well attended for the most part, and I feel have been a benefit to all concerned. Adequate funds are needed to enlarge their scope and extend their usefulness. I have come to the conclusion that teaching people to relax and encouraging amenities is a proper function of an institution such as this, and I believe that the Trustees would be thoroughly justified in setting aside a modest sum of the income in their charge to be used for this purpose.

There might be a small revenue left each year out of fees paid by students which could be appropriately used for this purpose. I also believe it would constitute one of the most desirable things we could undertake to do. Certainly, there has never been a time in the history of our country when people needed to be taught how to play and to get the necessary recreation essential to bodily well-being from this source. I trust, therefore, you will give this subject your careful consideration and favorable attention.

You will be gratified to know that debating activities were resumed by our students this year. In the contest with Auburn on April 30, our students obtained the unanimous vote of the judges. An endeavor will be made to enlarge the debating program another year.

### **GRADUATES FOLLOW AGRICULTURE**

The total number of our graduates since 1902 is 138. Of this number 116 are now living in Georgia, 13 in other states, 5 are in foreign countries and 4 have died. Two of the deceased were killed in battle while gallantly leading their men against the Germans. Of the total of our graduates at present, 48 are on farms, many of them, practically all of them owning and operating the land they are now cultivating. Thirty-one are engaged in extension work, chiefly in association with this institution. Thirteen are teaching in agricultural colleges, twelve are teaching agriculture in high schools, fourteen are agricultural workers of a commercial





An examination of 163 school children in one school district in Georgia showed 160 of them were defective in some way. The fact that 50 per cent were malnourished shows the great need for home economics training. These young women are studying nutrition and food values.





character, five are still in the army, three are taking advanced courses and nine are pursuing non-agricultural work.

It will thus be seen that a great majority of our graduates are located in Georgia and are engaged in active constructive service work associated either with farming enterprises or the training of people along educational lines related to agriculture.

The present graduating class is the largest in our history, all except one coming from Georgia. They constitute a thoroughly fine and representative group of Georgia men and women. They have applied themselves assiduously during their residence here at the College, and they go out imbued with high ideals and with purposeful motives in their hearts. Service, I think, will constitute the keynote of their lives. Those of our students who are engaged in farming are making an unqualified success and have already amply demonstrated the statement to be unfounded, which we have heard from time to time, that none of our men returned to the farm.

We have lost so many men and women from the College staff that it is difficult to maintain our teaching or extension activities. Strange to say, however, none of the men in the present graduating class are interested in teaching work. They are all anxious to get back on the farm. This would not indicate that a technical course in vocational education tended to wean men away from participating in our primary industry. Unless we can secure larger salaries or interest more of our graduates in teaching and extension work, we will be forced to employ instructors prepared in other states in order to carry forward the work of the College as effectively in the future as in the past.

### REPORT OF DISTRICT SCHOOLS

The eleventh annual meeting of the principals of the district agricultural schools was held in my office on Friday at 2 o'clock, April 23. Eleven of the principals were present or were represented by members of their staffs. The general plans and policies of the schools were discussed in detail. It appeared to be the consensus in opinion that no material change in courses or textbooks was necessary.

Dr. Joseph S. Stewart presented a plan by which the schools might establish courses and help in preparing teachers for the public schools. The deficiency in this respect is now the perplexing problem of our educators. The principals agreed to give this suggestion their earnest support, and it is believed that some effective work will be done in this direction. The schools decided to participate in a stock judging contest to be held at the State Fair this



fall in Macon under the auspices of the animal husbandry division. The boys who prove the most skillful judges will then be sent to the International Livestock Show in Chicago.

Dr. Joseph S. Stewart was requested to prepare the usual annual report which has been printed and distributed in years past through the agency of the College. The principals were unanimous in their desire that the literary, vocational and athletic contests be continued.

It is self-evident to all that with the increased costs by which these institutions are confronted that they cannot maintain themselves on their present income. A frank discussion of the financial situation was, therefore, entered into, and it was shown that these institutions would of necessity need an increased maintenance fund effective from January 1, 1921. It was agreed that a meeting looking to the attainment of this end be arranged for in Atlanta under the chairmanship of Professor J. H. Walker and that the College and its officials be asked to coöperate in this undertaking.

The standards of scholarship have been advanced and are being better maintained than formerly. Most of the schools had a good enrollment, and they are represented by many of the finest boys and girls from the districts in which they are located. Only a small per cent of these boys and girls are receiving any additional training. Such as they obtain tends to wed them to the country and the farm. Many of them who have returned home have already left an impression on the communities in which they live. The service work which these institutions are performing is of a well defined character, and should be sustained generously by the state.

The fifth literary, vocational and athletic contest of the district schools was held here at the College on April 23 and 24. More than one hundred boys and girls entered the contests, and they were carried through with great interest and enthusiasm.

The grand prize was won by the Ninth District Agricultural School at Clarkesville. The literary banner went to the First District School at Statesboro, the athletic banner to the Second District School at Tifton and the industrial banner to the Ninth District School at Clarkesville.

Gold medals bearing the seal of the University were awarded to the winners in the various events. These medals were provided out of funds furnished through the courtesy of the Virginia-Carolina Chemical Company.

The visiting contestants were given free admission to the Georgia-Pittsburg baseball games on Friday and Saturday afternoons. This constituted a pleasant diversion and an interesting experience



for the boys and girls. The thanks of the institution are due the athletic association of the University for the generous consideration extended its guests on this occasion. A delightful luncheon was served to the guests and visitors by the ladies of the home economics division of the College.

### MEETINGS AT THE COLLEGE

Each year the College becomes more and more the mecca of Georgia farmers. Throughout the growing season and especially after crops are laid-by, groups of visitors come to inspect our grounds, buildings, farm crops and live stock. It is not unusual for from two to five hundred people to be on our grounds at one time. Excursions are frequently organized under the leadership of the men and women county agents and come from widely scattered and distant points. It can be seen that our visitors thoroughly enjoy these occasions, and we are doing all in our power to encourage this sort of thing. By this means, we are able to acquaint thousands of people with the work of the College, and, in addition, disseminate much information of a fundamental character.

To many, "seeing is believing," and it can safely be said that most of our visitors are astonished at the size of our plant and the nature and extent of the operations which are daily being carried forward. Several thousand visitors of the character indicated came to see us since the last report. In addition to those attending such meetings, we have each year meetings of the State Horticultural Society, the County Agents' Annual Meeting and various gatherings of live stock men, farm bureau representatives, members of the Georgia Breeders' Association, and home economics workers.

This spring a new type of meeting has been instituted and successfully promoted. It consists of organizing and bringing to the College the members of the club organizations located in the various school districts in the surrounding counties. Already large delegations have visited us from Clarke, Greene and Oglethorpe counties. A picnic dinner is held on the grounds, and the holding of literary and athletic contests is encouraged. It is easy to see that the boys and girls are greatly benefited by these trips and encouraged to carry forward their work on a more effective basis. It is certain that through this arrangement the College has been made to aid and serve the need of every community thus reached to better advantage. With your approval, this sort of work will be continued in the future.

### SUMMER SCHOOL

The usual Summer School courses have been provided. They will be similar in character to those previously offered. The effort

of the college is confined this year to instruction in college credit subjects. Courses will be offered through the agency of this institution in trades and industries, home economics and agricultural education. When groups of students desire to take up other subjects than those indicated, facilities will be provided. It is felt by those in charge of these courses that they should not be asked to offer a course unless at least five individuals apply for it. I think this position is essentially sound and should be sustained.

As previously indicated, the demand for vocational teachers continues. This is particularly true of agriculture and home economics. Therefore, provision has been made for offering as complete and general and as varied college credit courses as would be of interest to men and women preparing to enter this field of service as circumstances would warrant.

The usual course in cotton grading has been arranged for. This course starts on June 28 and continues until July 31. The American Cotton Association has endorsed instruction of this character, and I am happy to be able to inform you that we instituted and have continued to operate the cotton grading school since January, 1908. It is gratifying to find that the work we have carried along in the face of many difficulties is now coming to be recognized as being of essential importance to the welfare of our cotton growers.

Through the agency of the course we established, a large number of men have been satisfactorily trained. Those entering the course in June and completing it should be able to pass the first civil service examination offered by the Bureau of Markets. With a little additional experience in warehouse work, they may pass the higher grade of examinations. There is an agitation for the establishment of bonded warehouses everywhere and the appointment of competent graders to classify the farmers' cotton. Both of these movements are in the right direction, and are based on sound economic principles.

It is evident that a large number of trained men will be required to serve both of these purposes. I am glad that the College, under your wise management, was far-sighted enough to see this need well in advance of its development and to take such effective measures to meet it. Indications point to a very large enrollment in the cotton grading school and in the summer school as well. The home economics work this year will be carried on entirely in our own laboratories, and the students studying in this subject will be housed in the new Woman's Building.

## BOYS' AND GIRLS' SHORT COURSE

The boys' and girls' short course was held as usual last August. There were 104 boys and 108 girls in attendance representing 55 and 58 counties of the state respectively. The school began on August 6 and closed on August 12. The indications are for a larger enrollment this year than for some time past. The dates selected are August 2-7. The usual courses will be offered and emphasized this year. These courses are now bearing fruit as a visit to any of our schools or colleges will reveal. It is both interesting and gratifying to find upon inquiry what a considerable percentage of the boys and girls, scholarship winners, received their first inspiration to win an education through the medium of our annual short course. Quite a number of boys are now in college who first were brought in contact with the opportunities which an agricultural education affords through coming up to one of the short courses held annually at the College. Moreover, it is self-evident that the personality, the scholarship and general character of the winners of these prizes show a fine improvement from year to year.

Our instructors now find, for instance, that their classes both understand, appreciate and profit by a more advanced type of training than it was originally found possible to employ. It is doubtful if anyone can justly estimate the value which these courses have been to the state of Georgia. Many people fail to obtain the position in life of which they are capable. This is largely due very often to the fact that they never had an opportunity to get outside of a given environment. Hence, they did not know how big, alluring and full of opportunity the great outside world was for those who properly prepared themselves for service. I consider that in having been the medium of bringing some thousands of boys and girls in contact with an enlarged vision and showing them the future possibilities of their state and the heights to which they might rise individually through proper training that the Georgia State College of Agriculture has conferred a boon of indefinable proportions on them and the state. Blazing out the trail, creating an instinct for service, helping people to be above the average, pointing out new pathways to success are ends of the most fundamental character. It has been our privilege to help the boys and girls of Georgia consistently along these lines.

## PRIZE TRIP TO LONDON

We will be able to house the girls this year in our new Woman's Building, thus providing them with unexcelled facilities for personal comfort and instruction. A special feature of the course is the emphasis placed on stock judging because we expect to select from those in attendance a team which is to represent Georgia in

the contests to be held at the Southeastern Fair in Atlanta this fall. The winner in this contest will be sent to London, England, to attend the Royal Fat Live Stock Show held annually in January. It will cost about \$500.00 for each representative thus sent. The funds are being provided for the purpose by the Southeastern Fair Association, and I am satisfied that the contest which has been arranged for will arouse great interest among our boys and do much toward stimulating an interest in live stock judging, handling and management that will redound to the material welfare and prosperity of our state.

In this connection I wish to acknowledge with grateful thanks the debt which the College and the boys and girls attending our annual short course owe to the many friends of education, many institutions, organizations and individuals throughout the state who believe in agricultural and home economics education, and who, through the contribution of scholarships, have made it possible for these future men and women leaders of Georgia to come up to Athens in August.

Scholarships were contributed by the Georgia Railway, the A. B. & A. Railway, the Southeastern Fair Association, the Georgia State Fair Association, the Allied Packers and through the agency of county boards of education, county commissioners of roads and revenues, women's clubs, bankers and business men generally.

We are grateful for the widespread support which has been accorded this movement. As an evidence of the continued approval of our friends of work of this type I only need to advise you that 147 scholarships valued at \$3,675.00 have been provided for the 1920 short course.

### CHANGES IN STAFF

This has been a year of frequent and, in very many instances, unfortunate changes in the membership of our college staff. There was a time when the college teacher or field representative was regarded as a theorist, as thoroughly impracticable and not fit to serve the interests of the variety of organizations for which his training and scholarship were designed to prepare him.

The war has brought about a sudden and radical change in this direction. College men played an important part in our triumph over the Germans. They furnished the major part of our officers and supplied our needs in a hundred other directions. This forced the recognition of their work and value on the part of institutions and organizations of various kinds and the industries concerned which they had not previously enjoyed. As a result, our institution is likely to be left without an adequate corps of instructors, research, and extension teachers. I feel that the public is not aroused



to the dangers of this situation. Surely it is not the part of wisdom to leave the instruction of the youth of the land in the hands of the incompetent and inefficient. It is impossible for our institution with its present income to compete with the commercial concerns which are taking our men from us.

You will find recorded the resignations of twenty-five individuals. Practically all of these people left us to secure a very substantial increase in salary. A conservative estimate indicates that we would have needed an increase in our maintenance fund of \$25,000.00 to have retained their services, and then they would have been continuing to work for us on the same basis of remunerations as they were offered by the organizations they left us to serve.

We have had reasons to be proud of our staff. They have done excellent work, and they have made a fine reputation for the institution that extends far beyond the confines of the state. We have been from five to ten years training a considerable number of these people, and now they leave us to engage in other fields of service work and their places cannot be satisfactorily filled. There are two reasons for this. One is financial, the other is that trained men of the types indicated in the list below are not available to take their places.

Is the instruction of the youth of the state to depreciate? Is the standard of the institution to be lowered? How are we to meet and overcome the exigencies by which we are confronted save through a substantial increase in salaries? If men of the type indicated are worth so much more to industry, are they not worth as much to the state in education? Surely the "laborer is worthy of his hire."

The fact of the matter is we have been underpaying the teacher for many years. Now, we will either have to recognize and endow him on a basis commensurate with his worth or do without his services. If we follow the latter method, we must not lose sight of the impressive example that Russian Bolshevism has given to the world as the result of placing ignorance and incompetency in charge of the affairs of great states and nations.

### NEED GREATER MAINTENANCE FUND

Georgia is well able to endow this institution with funds sufficient to retain in her employ the most effective and capable staff of workers to be found anywhere. Something must be done at once, and I recommend that you ask for an immediate increase of \$35,000.00 a year in the maintenance fund of the Georgia State College of Agriculture. There is no alternative, no basis of compromise, no escape from the present contingency.

## RESIGNATIONS

L. C. Hart, Professor of Agricultural Engineering.  
L. E. Rast, Associate Professor of Agronomy.  
J. W. Firor, Associate Professor of Horticulture.  
R. E. Blackburn, Field Agent in Horticulture.  
E. S. Brashier, Hog Cholera Specialist.  
C. A. Pyle, Field Agent in Veterinary Medicine.  
H. W. Caldwell, Associate Professor of Veterinary Medicine.  
T. G. Yaxis, Associate Professor of Dairy Husbandry.  
R. F. Wheelchel, Supervisor of Extension Schools.  
L. A. Zimm, Extension Forester.  
R. C. Harris, Field Agent in Farm Drainage.  
W. J. Clarke, Extension Sheep Specialist.  
S. H. Starr, Associate Professor of Farm Management.  
W. A. Smith, Field Agent in Bee Husbandry.  
H. L. Brown, Field Agent in Marketing.  
E. G. Welch, Associate Professor of Agricultural Engineering.  
H. B. Emerson, Field Agent in Beef Cattle.  
W. R. Nisbet, Field Agent in Beef Cattle.  
J. E. Downing, Assistant State Supervisor Pig Clubs.  
C. A. Martini, Associate Professor of Animal Husbandry.  
D. D. Long, Soil Expert in State Survey.  
James B. Berry, Professor of Forestry.  
W. M. Burson, Professor of Veterinary Medicine.  
R. M. Gridley, Field Agent in Beef Cattle.  
Bessie Boggess, Associate Professor Institutional Management.  
Frank C. Ward, Cotton Specialist.

## APPOINTMENTS

George Alexander Fain, B.C.E., University of Tennessee, Professor of Agricultural Engineering.  
Haden Mayo McKay, B.S.A., Mississippi Agricultural College, Field Agent in Horticulture.  
Neal Dow Peacock, B.S.A., Purdue University, Instructor in Horticulture.  
Herman Victor Persells, D.V.M., Kansas City Veterinary College, Hog Cholera Specialist.  
Henry Norman Kaldahl, B.S., University of Minnesota, Associate Professor of Animal Husbandry.  
George Henry Firor, B.S.A., University of Georgia, Field Agent in Horticulture.

- Wyatt Arnton Clegg, B.S.A., University of Georgia, Associate Professor of Agricultural Engineering.
- Louis H. Wright, D.V.M., Cornell University, Associate Professor of Veterinary Medicine.
- A. G. G. Richardson, D.V.M., University of Pennsylvania, Professor of Veterinary Medicine.
- George Paul Saye, B.S.A., University of Georgia, Associate Professor of Animal Husbandry.
- Julian Howell Miller, B.S.A., University of Georgia, Associate Professor of Horticulture.
- Emory DeWitt Alexander, B.S.A., University of Georgia, Associate Professor of Agronomy.
- Charles Watson Mobley, Adjunct Professor of Agricultural Engineering.
- Arthur Stewart Bussey, B.S.A., University of Georgia, Scientific Assistant in Animal Husbandry.
- William Edwin Garnett, M.A., Peabody University; Ph.D., University of Wisconsin, Associate Professor of Agricultural Education.
- Curry Lafayette Veatch, B.S.A., University of Georgia, Associate Professor of Agricultural Education.
- Milton Cleveland Gay, B.S.A., University of Georgia, Field Agent in Marketing.
- James A. Lowery, A.B., University of Georgia, Instructor in Rehabilitation Section.
- Pauline McKinley, Instructor in Rehabilitation Section.
- May Treanor, Instructor in Rehabilitation Section.

## THE WORK OF THE DIVISIONS

The work of the Georgia State College of Agriculture is organized on the basis of eleven major and two minor divisions. Each of these divisions employs a considerable number of men and women as the case may be and it is charged with carrying forward instruction, research, or extension teaching which properly should be associated with that particular division. The divisions established at present are Agronomy, Animal Husbandry, Horticulture, Forestry, Agricultural Chemistry, Agricultural Engineering, Veterinary Medicine, Extension, Home Economics, Agricultural Education and Poultry Husbandry. The associated divisions are Editor and Librarian.

By the arrangement outlined, economy of time and energy is secured, finances conserved and the work of the division placed in charge of a skilled specialist. The head of each division knows just how much money he will have for any given year to spend for

the various lines of work under his charge. He can thus make plans well in advance and so can direct the energies of his division advantageously. This plan has now been in effect for a sufficient length of time to try it out and fully justify its merit. Naturally, some of these divisions have attained a considerable size.

The duties and responsibilities of the heads thereof are correspondingly great. It is important to remember, therefore, that these men have large duties and responsibilities in addition to those of the mere teacher. Not only must they keep abreast of the time with regard to the work of instruction and see that their divisions are well equipped, but they must promote such research work as is undertaken, and aid in the development and expansion of the extension teaching activities assigned to their respective divisions. It takes men of considerable administrative capacity and of experience to handle work of this character satisfactorily, and I wish to make clear to your Honorable Body and to the public in general these facts relative to our organization in the hope that when the situation is thoroughly understood, it will be possible to secure more adequate salaries for these men.

It is not just or fair to expect the maximum of service for the minimum of pay. It is manifestly impossible for people to do their best work when constantly reminded of their inability to meet the rapid increase of living costs satisfactorily. "Hope deferred maketh the heart sick" is a good text and one that we should keep in mind at this time.

Those who teach also serve. Their need, their merits, their worth should be recognized now before it is too late. There is not a division of the College which is not crippled by reason of changes in its personnel. Are these to be continued and become more aggravated? That is the question that you, as Trustees, and the Legislature must decide.

Judgment on this position cannot be deferred much longer. Can I consistently as a college executive advise and urge young men to work for the state on salaries which barely pay their expenses when they can go somewhere else and secure one-third or one-half more in the way of remuneration? Can we ask them to stay and teach the men and women crowding our halls for a beggarly pittance when they can go out and operate land and make a fine competency therefrom? These are problems requiring immediate consideration and solution. The answer given will determine the degree of solidarity we will be able to maintain in our staff. The future status of our work as it pertains to the three lines of activity with which we are charged with carrying into effect is at stake, and the interests to be served are of such far-reaching and fundamental importance that the adequate support of this work cannot



be denied on the basis of financial inability. I feel that it is my duty as well as my privilege to report these facts for your consideration and to ask that they receive your immediate consideration and thoughtful attention.

## DIVISION OF EXTENSION

The Georgia State College of Agriculture began its extension work in 1908 as a pioneer in carrying agricultural information to the farmer on the farm and giving the necessary rural community leadership for progressive agricultural undertakings. It has systematically and effectually developed this work in coöperation with the United States Department of Agriculture and the several counties of the state in which extension activities are carried on until today we have a progressive organization embracing sixteen different projects.

The work which the extension division is doing has won the confidence and the support of both the farmer and the business man, and the county agent and the home demonstration agent are now considered invaluable assets to the continued progress and prosperity of not only the farming communities but the cities as well for they depend directly upon the farmer for practically all their commodities.

The basic projects for extension work in Georgia are: administration, publications, county agent work, home demonstration work, boys' clubs, live stock diseases, fair exhibits, forestry, live stock, poultry, agronomy, dairying, marketing, extension schools, horticulture, and agricultural engineering.

The extension workers with headquarters at the college are given on the inside cover of this report. A list of the district, special, and county agents follows:

## DISTRICT AND SPECIAL AGENTS

†\*THOMAS LYNN ASBURY, B.S.A., District Supervisor of County Agents.  
†\*JAMES AUGUSTUS JOHNSON, B.S.A., District Supervisor of County Agents.

†\*WALTER SCOTT BROWN, B.S.A., District Supervisor of County Agents.  
†\*ELMER REECE STRAHAN, B.S.A., District Supervisor of County Agents.  
†\*CHARLES GARDEN GARNER, B.S.A., District Supervisor of County Agents.

JAMES WOFFORD COLE, Special Extension Agent.

CLIFFORD MASSEY JAMES, A.B., B.S.A., B.L., Special Extension Agent.

JAMES THOMAS PITTMAN, Special Extension Agent.

MRS. EDITH MAY ANDREWS, District Supervisor of Home Demonstration Work.

†\*MRS. ELLA GREEN BOND, District Supervisor of Home Demonstration Work.

†\*KATHERINE DRESSE LANIER, District Supervisor of Home Demonstration Work.

†\*ESTELLE BOZEMAN, District Supervisor of Home Demonstration Work.

†\*GEORGIA CREWS, District Supervisor of Home Demonstration Work.

†\*MRS. LEILA RITCHIE MIZE, District Supervisor of Home Demonstration Work.

SUSAN MATTHEWS, B.S., Special Agent in Home Demonstration Work.

MARTHA McALPINE, A.B., Special Agent in Home Demonstration Work.

## COUNTY AGRICULTURAL AGENTS

County	Name of Agent	Post Office
Appling - - - - -	-Roy Rogers - - - - -	Baxley
Baldwin - - - - -	-Hancel William Caldwell, B.S.A., D.V.M., - - - - -	Milledgeville
Barrow - - - - -	-William Hill Hosch - - - - -	Winder
Bartow - - - - -	-Charles Holcomb Cox - - - - -	Cartersville
Bibb - - - - -	-William Green Middlebrooks - - - - -	Macon
Brooks - - - - -	-Millard Francis Gaddis - - - - -	Quitman
Burke - - - - -	-Lawrence Clyde Strahan, B.S.A. - - - - -	Waynesboro
Camden - - - - -	-William Ritchie Smith - - - - -	St. Marys
Calhoun - - - - -	-Albert Edgar Gibson, B.S.A. - - - - -	Edison
Candler - - - - -	-Homer Jackson Prance - - - - -	Metter
Carroll - - - - -	-Edward Talbot Jackson - - - - -	Carrollton
Catoosa - - - - -	-Williams Clyde Jones, Jr., B. S. A. - - - - -	Ringgold
Chatham - - - - -	-Gratz Dent, B.S.A. - - - - -	Savannah
Clarke - - - - -	-Jones Purcell, B.S.A. - - - - -	Athens
Clayton - - - - -	-Wade Pritchard Huie, A.B. - - - - -	College Park
Clinch - - - - -	-Carl Hamby Gaddis - - - - -	Homerville
Cobb - - - - -	-Edgar Oliver McMahan, B.S.A. - - - - -	Marietta
Colquitt - - - - -	-Richard Anderson Stratford, B.S.A., Moultrie	
Coffee - - - - -	-William Edgar Bowers, B.S.A. - - - - -	Douglas
Coweta - - - - -	-Benjamin Magruder Drake, A.M., Ph.D., - - - - -	Turin
Cook - - - - -	-Harry Clarke Weir - - - - -	Adel
Crisp - - - - -	-Clarence Boozer Culpepper - - - - -	Cordele
Decatur - - - - -	-Jefferson Irwin Davis, B.S.A. - - - - -	Bainbridge
Dodge - - - - -	-Robert Powell Howard, B.S.A. - - - - -	Eastman
Dooly - - - - -	-Eben Corey Mann - - - - -	Vienna
Dougherty - - - - -	-Hendricks LaFayette Cromartie - - - - -	Albany
Douglas - - - - -	-Hoyle Newton Kemp, B.S.A. - - - - -	Douglasville
Elbert - - - - -	-Joseph Ernest Cheatham, B.S.A. - - - - -	Elberton
Emanuel - - - - -	-Robert Cantrell Rowan - - - - -	Swainsboro
Fannin - - - - -	-Alvin John Nitzschke, B.S.A. - - - - -	Blue Ridge
Fayette - - - - -	-Wardie Nuisam Daniel Dixon - - - - -	Fayetteville
Fulton - - - - -	-Harry Lowrance Brown, B.S.A. - - - - -	Atlanta
Glynn - - - - -	-Ralph Bernard Reeves - - - - -	Brunswick
Greene - - - - -	-Wade Hampton West - - - - -	Greensboro
Gordon - - - - -	-Joseph Lee Turk - - - - -	Calhoun
Grady - - - - -	-Patrick Henry Ward - - - - -	Cairo
Gwinnett - - - - -	-Albert Gordon Robison - - - - -	Lawrenceville
Hancock - - - - -	-Louis Irwin Skinner, B.S.A. - - - - -	Sparta
Hart - - - - -	-John Henry Warren - - - - -	Hartwell
Irwin - - - - -	-Edwin Penn McGee - - - - -	Ocilla
Jasper - - - - -	-Mark Sanders Womack, B.S.A. - - - - -	Monticello
Jeff Davis - - - - -	-Archibald Boyd Hursey - - - - -	Hazelhurst
Jefferson - - - - -	-Carlos Vivian Shirley - - - - -	Louisville

County	Name of Agent	Post Office
Jenkins - - - - -	Henry Homer Parrish - - - - -	Millen
Laurens - - - - -	James Bedo Tyre - - - - -	Dublin
Meriwether - - - - -	Cecil Guy Neal, B.S.A. - - - - -	Manchester
Miller - - - - -	Jesse Orville Pinkston - - - - -	Colquitt
Mitchell - - - - -	Joseph McDuff Turner - - - - -	Camilla
Morgan - - - - -	Hillyer Horace Kemp - - - - -	Madison
Monroe - - - - -	Hubert Leonidas Worsham, B.S.A., - - - - - R. No. 3, Culloden	
Muscogee and		
Chattahoochee - - - - -	Felix Lloyd Jenkins - - - - -	Upatoi
Newton - - - - -	James Karl Luck, B.S.A. - - - - -	Covington
Oconee - - - - -	Selnie Devanie Truitt - - - - -	Watkinsville
Oglethorpe - - - - -	Thomas Sharp Porter, B.S.A. - - - - -	Lexington
Paulding - - - - -	Woodson Seely Burns, A.B. - - - - -	Dallas
Pierce - - - - -	Thomas Benjamin Wiley - - - - -	Blackshear
Polk - - - - -	William Henry Garner - - - - -	Rockmart
Pulaski - - - - -	Luther Stephens Watson, B.S.A.,	Hawkinsville
Putnam - - - - -	Oscar David Watson, B.S.A. - - - - -	Eatonton
Rabun - - - - -	John Virgil Arrendale, B.S.A. - - - - -	Clayton
Rockdale - - - - -	Reuben Lee Blackwell, B.S.A. - - - - -	Conyers
Richland - - - - -	Bright McConnell, B.S.A., M.S.A. - - - - -	Augusta
Spaulding - - - - -	William Topley Bennett, B.S.A. - - - - -	Griffin
Sumter - - - - -	George O. Marshall, A.B. - - - - -	Americus
Tattnall - - - - -	John Davis Brandon - - - - -	Reidsville
Talbot - - - - -	Fred Dudley Jeter - - - - -	Talbotton
Thomas - - - - -	William Dozier Hasty, B.S.A. - - - - -	Thomasville
Toombs - - - - -	Talmadge Young Williford, B.S.A. - - - - -	Lyons
Troup - - - - -	John Robert Williams - - - - -	LaGrange
Upson - - - - -	Clifford Franklin Nelson - - - - -	Thomaston
Walton - - - - -	Herman West Bingham, B.S.A. - - - - -	Monroe
Ware - - - - -	Lewis Clyde Walker - - - - -	Waycross
Warren - - - - -	Russell Reyno Petree - - - - -	Warrenton
Washington - - - - -	Homer Adolphus Cliett, B.S.A. - - - - -	Sandersville
Whitfield - - - - -	Charles Olin Smith - - - - -	Dalton
White - - - - -	Alfonzo D. Robertson, B.S.A. - - - - -	Cleveland
Wilcox - - - - -	William S. Childs, A.B. - - - - -	Rochelle
Wilkes - - - - -	James Luke Burdette, B.S.A. - - - - -	Washington

## COUNTY HOME DEMONSTRATION AGENTS

County	Name of Agent	Post Office
Appling - - - - -	Mrs. Frankie Parker - - - - -	Baxley
Bibb - - - - -	Irene Houston - - - - -	Macon
Banks - - - - -	Addie Bush McCoy - - - - -	Homer
Barrow - - - - -	Rose Dillard - - - - -	Winder
Butts - - - - -	Mrs. Mary Elizabeth Butner - - - - -	Jackson
Carroll - - - - -	Mrs. Lizzie Atherton Fields Whatley, - - - - -	Carrollton
Clarke - - - - -	Annie Mae Wood - - - - -	Athens
Coffee - - - - -	Mary Melissa Norman - - - - -	Douglas
Coweta - - - - -	Lottie Lorine Collins - - - - -	Newnan
Chatham - - - - -	Lois Guerard Carter - - - - -	Savannah
Colquitt - - - - -	Texas Henderson - - - - -	Moultrie
Crisp - - - - -	Lou Hamilton - - - - -	Cordele
Crawford - - - - -	Beulah Champion - - - - -	Roberta
Decatur - - - - -	Mary Stella Mathews - - - - -	Bainbridge
Dodge - - - - -	Mrs. Mabel Rogers Morrison - - - - -	Eastman
Dooly - - - - -	Mae Morris - - - - -	Vienna
Elbert - - - - -	Lula Peek - - - - -	Elberton
Emanuel - - - - -	Mattie Irene Hendricks - - - - -	Swainsboro
Early - - - - -	Martha Carruth Weaver - - - - -	Blakely
Floyd - - - - -	Grace Lydia Anderson, A.B. - - - - -	Rome
Fulton - - - - -	Floy Shannon - - - - -	Atlanta
Greene - - - - -	Ruby Thompson - - - - -	White Plains
Glynn - - - - -	Mrs. Madge Merritt - - - - -	Brunswick
Grady - - - - -	Emiline Cleveland - - - - -	Cairo
Habersham - - - - -	Elizabeth Saunders - - - - -	Clarkesville
Hall - - - - -	Erma Lucinda Little - - - - -	Gainesville
Harris - - - - -	Mrs. Hettie Mitcham White - - - - -	Chipley
Hart - - - - -	Annie Maud Miller - - - - -	Hartwell
Irwin - - - - -	Ida Mae Baker - - - - -	Ocilla
Johnson - - - - -	Clemmie Lenora Massey - - - - -	Wrightsville
Jasper - - - - -	Mrs. Ida Mercer Phillips - - - - -	Monticello
Jackson - - - - -	Lurline Collier - - - - -	Jefferson
Jefferson - - - - -	Mrs. Leona Humes Powell - - - - -	Louisville
Laurens - - - - -	Ethel Shelor - - - - -	Dublin
Lowndes - - - - -	Mrs. Lorena Thorpe - - - - -	Valdosta
McDuffie - - - - -	Mattie Lee Cooley, A.B. - - - - -	Thomson
Morgan - - - - -	Mrs. Mary Selkirk Offutt - - - - -	Madison
Mitchell - - - - -	Annie Mortimer Schley - - - - -	Camilla
Muscogee - - - - -	Jessie Eliza Fortson - - - - -	Columbus
Newton - - - - -	Woffie Floyd - - - - -	Covington
Oconee - - - - -	Willie Vie Dowdy - - - - -	Watkinsville
Oglethorpe - - - - -	Cecile Neale Little - - - - -	Crawford
Pierce - - - - -	Mrs. Annie W. Wiley - - - - -	Blackshear
Polk - - - - -	Sarah Morris - - - - -	Cedartown



County	Name of Agent	Post Office
Pulaski - - - - -	Sarah Smith, A.B. - - - - -	Hawkinsville
Richmond - - - - -	Henrietta Floride Allen - - - - -	Augusta
Spalding - - - - -	Mrs. Myrtie Saunders Sibley - - - - -	Griffin
Sumter - - - - -	Mrs. Edna Martin Williams - - - - -	Americus
Tattnall - - - - -	Maggie Ethel Bethea - - - - -	Reidsville
Terrell - - - - -	Mrs. Helen Giles Gurr, A.B. - - - - -	Dawson
Tift - - - - -	Mrs. Tassie Overbey Clark - - - - -	Tifton
Thomas - - - - -	Lilla Forrest - - - - -	Boston
Twiggs - - - - -	Sidney Bertha Dunevent - - - - -	Jeffersonville
Towns - - - - -	Mrs. Maggie Berrong - - - - -	Hiawassee
Walker - - - - -	Martha Rebekah Clark - - - - -	LaFayette
Walton - - - - -	Margaret Eulalia Burge - - - - -	Monroe
Whitfield - - - - -	Jewel Colclough - - - - -	Dalton
Wilkes - - - - -	Rosa Mabel Davis - - - - -	Washington
Washington - - - - -	Cla Emma Brawner - - - - -	Sandersville
Wayne - - - - -	Mrs. Annie Bennett - - - - -	Jesup
Worth - - - - -	Mary Allen Overby, A.B. - - - - -	Sylvester

### NEGRO AGENTS

As required by the Smith-Lever Act and a memorandum of agreement between the Board of Trustees of the Georgia State College of Agriculture and the United States Department of Agriculture the following negro agents are employed to carry on extension work in agriculture and home economics exclusively among negroes:

Percy H. Stone, Athens—Jeruel Academy.

S. J. Willoughby, Augusta—Walker Baptist Institute.

W. W. Hatcher, Atlanta—Morris Brown College.

J. U. H. Simms, McIntosh—Dorchester Academy.

G. W. Patterson, Cuthbert.

Elbert Stallworth, Americus.

S. H. Lee, Griffin—Cabin-Creek School.

A. H. Hinesman, Waycross.

B. S. Adams, Statesboro—Colored High School.

W. R. King, Newnan—Coweta School.

Alva Tabor, Sandersville—Washington Institute.

O. S. O'Neal, Fort Valley.

Jennie C. O'Neal, Fort Valley.

Juanita Conyers, Savannah.

There are 243 employees in the extension service as follows; 3 supervisors and 18 specialists with headquarters at Athens, 9 field supervisors, 3 special agents, 79 white agricultural agents, 12 colored agricultural agents; a total of 124 men. The organization for extension work with women in home economics is as follows: 4 supervisors with headquarters in Athens, 3 specialists with headquarters in Athens, 5 supervisors in the field, 63 white county home demonstration agents, and 30 colored home demonstration agents. Fourteen clerks are also employed, making a total of 243.

### **BIG SERVICE SCHOOL**

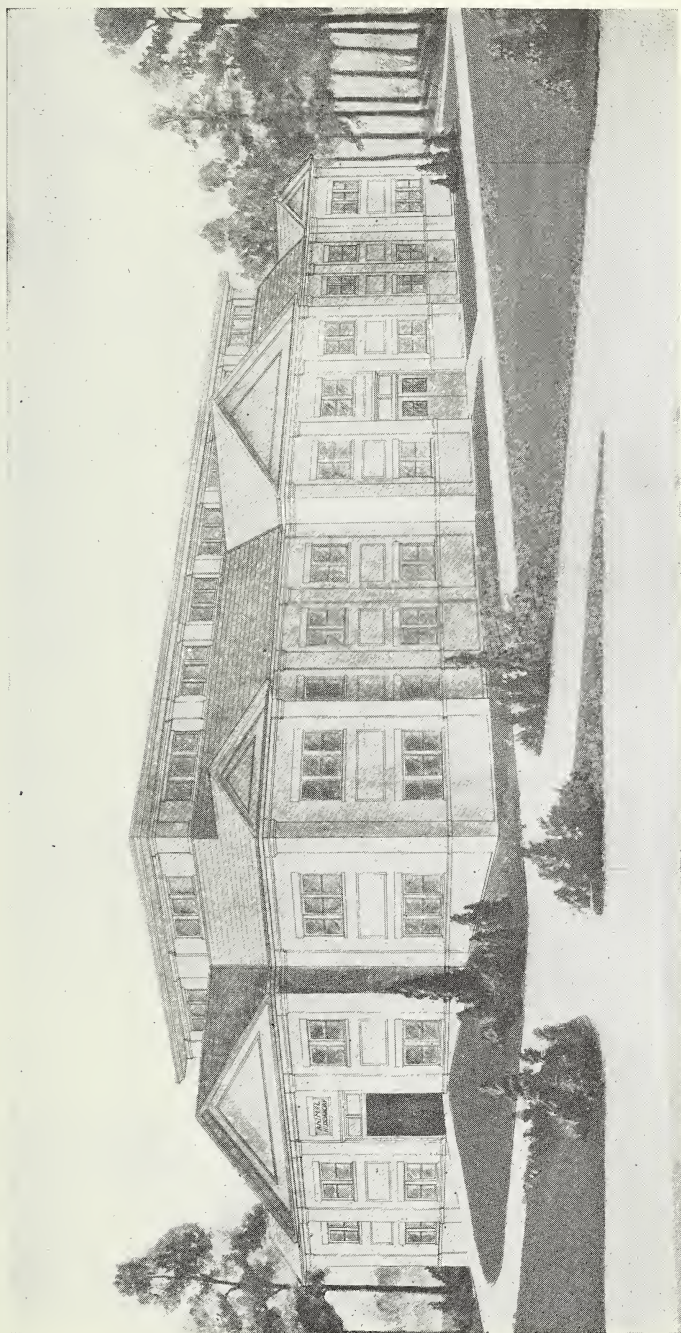
The extension division considers every farmer, farm woman, and farm boy and girl a possible student in its big school of practical and progressive farming. Its class rooms are the open field, the kitchen, the garden, the club boy's corn patch and pig pen, and even the rural school. Last year it enrolled 117,410 people in its courses and these were divided as follows: 6,189 in the corn clubs, 3,973 in the pig clubs, 2,758 in the canning clubs, 891 in the wheat clubs, 765 in the cotton, peanut and other farm crops clubs, 3,309 in the colored farm makers clubs, 86,691 in the farmers' clubs, and 8,500 in the farm women's clubs. Its watchword was service.

### **LAND CLEARING DEMONSTRATIONS**

An excellent example of the pioneer service work which the College is doing is seen in the Land Clearing Demonstrations conducted in south Georgia last fall at which 36,000 people were shown the best methods of clearing their land with stump pullers and dynamite, how to drain the swamps, and finally how to best prepare the land and make a good seed bed. A crew of forty men and a train of nine cars of tractors, stump pullers, dynamite, and other equipment was sent out under the auspices of the Georgia State College of Agriculture and in coöperation with the Georgia Landowners Association and the United States Railroad Administration.

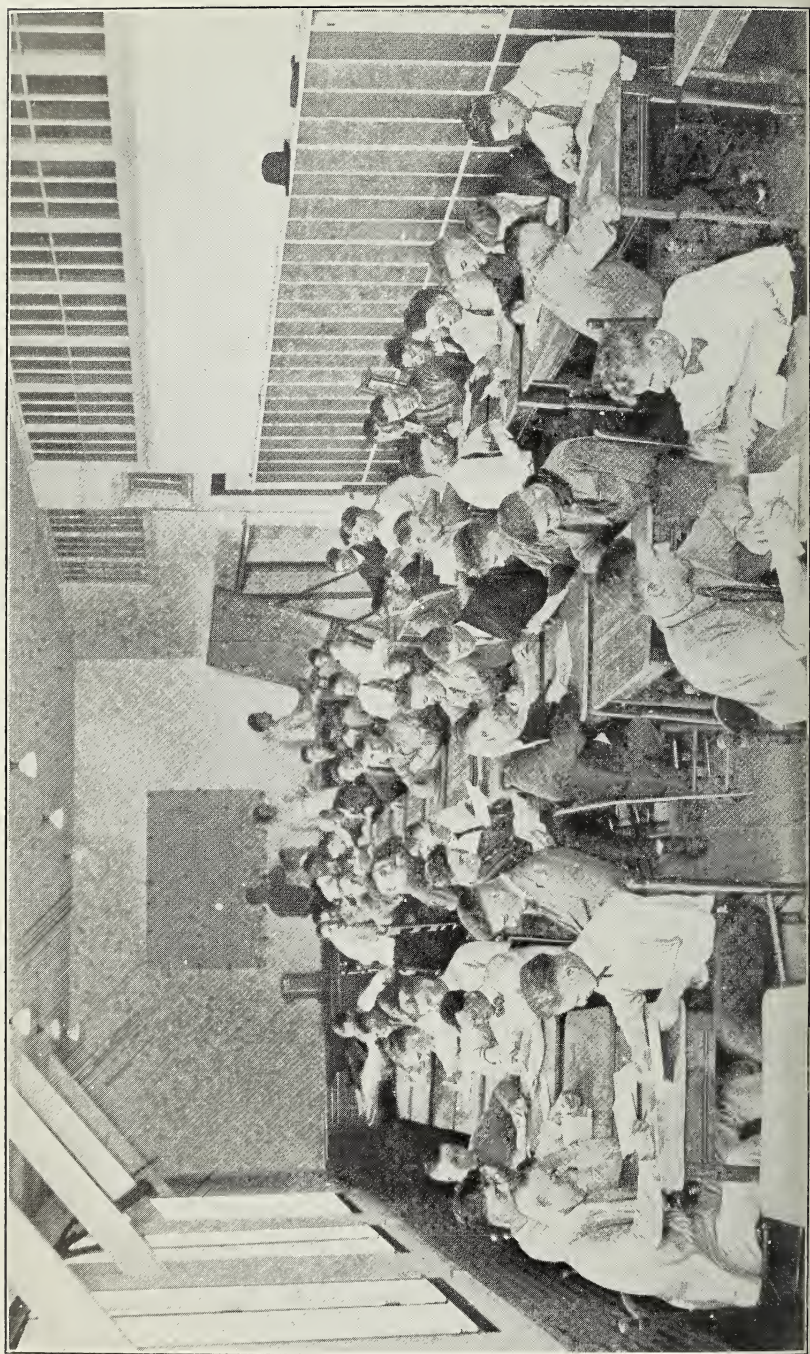
The tractor was introduced into territory where no machine like this had ever been seen before and it was definitely proven that it is a success under south Georgia conditions. In the use of dynamite the farmers were shown how to bore the stump, how to cap and tamp the charge, and how much dynamite to use for different stumps. As a result of the campaign one of the crew has since patented a stump boring machine which drills the hole in the largest stump in less than a minute. It is now on the market and has proved a success.

Drainage of the south Georgia swamps into which labor will not now go and work in the muck and water is a big problem. The



The Animal Husbandry Building, which is now partially completed, will furnish offices, class rooms and a large live stock judging arena. Unless it is finished at an early date the institution cannot instruct the large number that will enroll this fall. The Government is asking the College to take 500 wounded soldiers for retraining.







Land Clearing Demonstrations conclusively proved that the ditches necessary could be dug quickly, successfully, and economically by the use of dynamite.

The Land Clearing Demonstration Campaign was but one of a long series of service movements that have been initiated and fostered by the college. The best known are the campaigns for pure bred live stock of all kinds first announced by means of a Live Stock Train, the fight on the boll weevil, the production and conservation of food products during the war, and the use of calcium arsenate to fight the boll weevil.

### EXTENSION FUNDS—1919-1920.

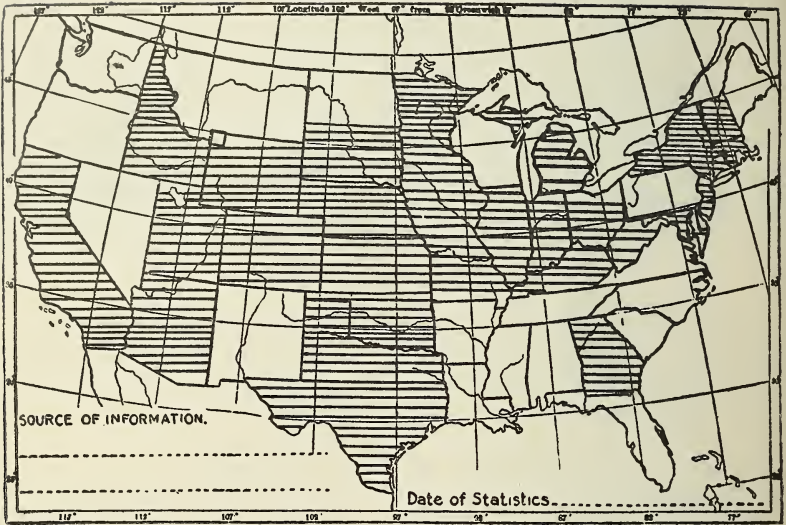
The total funds available for extension work in Georgia for the fiscal year ending June 30, 1920, was \$477,034.55. This does not include the \$40,000.00 appropriated by the state for the support of the soil survey and other research work, or the funds made available by various bureaus of the U. S. Department of Agriculture with which special cooperative work and certain extension and research projects are being carried forward. The sources from which the funds were received are shown below for your information:

Federal Smith-Lever .....	\$119,085.53
State Smith-Lever .....	109,085.53
Federal Extension fund.....	62,933.67
States Relations Office.....	40,000.00
Other Bureaus U. S. D. A.....	17,020.00
From the State for Farmers' Institutes.....	2,500.00
Funds appropriated directly towards Agents salaries by counties of Georgia.....	126,409.82
	<hr/>
	\$477,034.55

You will notice that of the \$477,034.55 only \$111,585.53 comes from the treasury of the state of Georgia. Through cooperation with the bureaus of the U. S. Department of Agriculture we have been able to secure considerable funds for the farmers of Georgia in working out their agricultural problems. It is a compliment to the service and to you as its trustees that we have been able to secure these funds to further our work in the state. The contribution of \$126,409.82 by the counties employing agents measures the support and confidence which they have in extension work.

Since the greater production of raw materials of all kinds including food crops is now of so great importance to the nation's welfare and its future prosperity, the extension work should be rapidly expanded to include every county in the state. If all the appropriations now in sight for the fiscal year 1920-1921 are secured we will have only enough funds to employ agents in about one hundred counties of the state. This important matter bespeaks your thoughtful attention.

## FARM BUREAU STATES



Georgia leads in farm bureau work in the Southeast

### THE COUNTY FARM BUREAU

As an outgrowth of agricultural extension work in this state, has come the county farm bureau movement which includes all the activities of the rural communities for progress and advancement in agriculture and home making.

The county farm bureau may be described as composed of community councils in every well established community center. Each council has its own officers and plans a program of work for the community to carry out. Together the councils coöperate for agricultural work in the entire county under an advisory board composed of two representatives from each community center, representatives from each of the professions, and special agricultural

Sponsored by the extension division a state convention of farm bureau delegates was held in Atlanta in January and the Georgia leaders.

Farm Bureau Federation organized. In March representatives from Georgia joined with those from 27 other states and helped to form the American Farm Bureau Federation with headquarters in Chicago. The president of the Georgia federation is a member of the executive committee of the national association. Today there is a farm bureau with a strong advisory board in 56 Georgia counties.

The Georgia Farm Bureau Federation has adopted the program of

work of the extension division as its program and is aiding in carrying it into effect. In fact, the farm bureau movement in its last analysis is nothing more than the agricultural extension teaching and leadership movement which this institution is carrying forward. The county bureaus are creating club divisions, market divisions, swine growers divisions, and many others, materially aiding and supporting our work.

### **MORE PAY FOR COUNTY AGENTS**

Considering the excellent service they render and the great expense they have, our county agents are woefully underpaid. Many county agents work from ten to twelve hours a day and then hold night meetings over the county. Conservative business men in several counties have stated that their county agents are worth at least \$10,000.00 a year to the county.

When one stops to consider the heavy expense entailed upon a county agent for travel, it is easy to understand that the salary is meager for this kind of work. The agent must provide himself with an automobile, office supplies, and field equipment. The first cost of equipment, including automobile, ranges from \$750 to \$1,000, the life of which equipment is usually about two years. Therefore, the distributive cost not including the interest on the investment is about \$500 annually. This does not include the up-keep of auto and other traveling expenses. The average cost of gas, oil, and repairs for a car is about \$62.50 per month or \$750 per year. The cost of up-keep of auto plus the purchase price makes the expenses of the county agent work to the agent himself \$1,000 to \$1,200 annually. Therefore, in \$1,500 to \$2,500 salary, an agent has hardly enough left for ordinary living expenses.

The county agents' duties are many and varied. Special attention has been given to individual farm demonstrations, excursions to special demonstrations, farms and other places of interest. With the individual farmer, the demonstrations are conducted in relation to soil building, general farm crops, all phases of live stock and marketing problems. Under soil building considerable progress has been made in drainage, terracing, stumping, the use of lime, farm manures, and soiling crops, and in the rational use of commercial fertilizers. In this connection preparedness to meet the boll weevil as well as food production for war time emergency has been taken into account. This effort toward a proper method of balanced farming constitutes the greatest part of the agent's work.

Records of demonstrations in general farm crops and of miscellaneous demonstrations are given below.

## DEMONSTRATIONS IN GENERAL FARM CROPS

Name of Crop	No. of Demonstrators	Acreage	Yield per Acre
Corn - - - - -	5,765	54,384	33 bushels
Cotton - - - - -	4,274	27,622	868 pounds
Tobacco - - - - -	121	1,504	676 pounds
Wheat - - - - -	3,284	16,756	21 bushels
Oats - - - - -	2,796	17,889	31 bushels
Rye - - - - -	1,834	8,647	16 bushels
Alfalfa - - - - -	518	849	4 tons
Crimson Clover - - - - -	134	535	2 tons
Sweet Clover - - - - -	3	20	
Sorghum and Peas - - - - -	1,235	6,809	2 tons
Red Clover - - - - -	57	183	3½ tons
Oats, Vetch and Rye - - - - -	45	290	3½ tons
Burr Clover - - - - -	166	211	
Mixed Grasses & Clovers - - - - -	13	136	
Lespedeza - - - - -	105	530	2 tons
Cow Peas - - - - -	2,307	14,360	13 bushels seed, 2 tons hay
Velvet Beans - - - - -	1,692	17,282	16 bushels seed, 2 tons hay
Soy Beans - - - - -	396	2,436	11 bushels seed 1½ tons hay
Peanuts - - - - -	1,357	12,855	20 bushels seed 1 ton hay
Irish Potatoes - - - - -	326	1,265	101 bushels
Sweet Potatoes - - - - -	1,148	1,827	210 bushels
Total - - - - -	27,576	186,390	

## DEMONSTRATIONS IN HOME ORCHARDS

Home Orchards	No. of Orchards	No. of Trees
Inspected - - - - -	1,112	247,696
Pruned - - - - -	1,001	299,926
Sprayed - - - - -	756	298,359
Treated for borers - - - - -	436	236,851
Planted - - - - -	691	136,799
Demonstrations in apples - - - - -	----	546
Demonstrations in peaches - - - - -	----	1,302
Demonstrations in all other fruits - - - - -	----	137
Total - - - - -	3,996	1,221,616

## DEMONSTRATIONS IN FEEDING

Type	No. of Demonstrations	No. of Animals
Dairy Cattle - - - - -	46	215
Beef Cattle - - - - -	85	956
Hogs - - - - -	532	2,852
Sheep - - - - -	3	3
Total - - - - -	666	4,026



## PURE BRED ANIMALS BOUGHT

Kind of Animal	Number
Dairy bulls -----	153
Dairy cows and heifers-----	466
Beef bulls -----	122
Beef cows and heifers-----	459
Boars -----	647
Sows and gilts -----	380
Rams -----	84
Ewes -----	366
Stallions -----	41
Jacks -----	49
Brood mares -----	352
Total -----	3,119

## NEW FARM IMPLEMENTS AND TOOLS BOUGHT

Kind	Number
Binders -----	214
Hay presses -----	229
Gas Engines -----	333
Two-horse Cultivators -----	656
Tractors -----	767
One-horse Cultivators -----	1,571
Mowers -----	1,041
Grain Drills -----	460
Disc Harrows -----	1,531
Plows -----	3,225
Hay Loaders -----	8
Motor Trucks -----	537
Corn Planters -----	1,525
Hay Rakes -----	913
Ensilage Cutters -----	88
Cream Separators -----	87
Spraying Machines -----	514
Manure Spreaders -----	78
Small Tools -----	5,672
Total -----	19,449

## FARM BUILDINGS AND MACHINERY

Buildings erected -----	621
Farm buildings improved -----	693
Farm building plans furnished-----	597
Farm buildings whitewashed -----	913
Home water systems installed -----	267
Lighting systems installed -----	1,192

The facts presented show that the county agents have carried out 27,576 demonstrations in general farm crops on 186,380 acres. The average yield of corn was 33 bushels per acre, cotton 868 pounds per acre, oats 31 bushels per acre, and wheat 21 bushels.

Excellent work was done in fostering the growing of live stock. In grazing demonstrations, there were 12,659 farmers who worked with the county agents to get better results in grazing crops and 2,276 farmers aided by the agents improved or started permanent

pastures. The agents have conducted demonstrations in orchard spraying and pruning, thus encouraging the growing of better fruit on the farm for family use. The total number of demonstrations held with farmers were 31,885. Many of these demonstrations were not only valuable to the farmers with whom they were conducted but to other farmers of the communities as well.

In addition to the many demonstrations, the agents were called on to perform other kinds of work which are partially given below:

### MISCELLANEOUS EXTENSION WORK

Number visits by agents to	
Demonstrators -----	32,836
Coöperators -----	23,047
Other farmers -----	27,967
Business men -----	12,776
Club members -----	20,965
Total -----	117,591
Calls on agents relative to work:	
Personal -----	68,450
Telephone -----	52,653
Total -----	121,103
Miles traveled:	
Railroad -----	45,889
Team -----	2,662
Auto -----	295,074
Otherwise -----	1,846
Total -----	345,471
Farmers' meetings held under auspices agents or Extension	
Division -----	2,263
Meetings all kinds addressed -----	2,838
Total attendance (approximate) -----	126,389
Field meetings held by agents -----	1,090
Total attendance (approximate) -----	40,192
What percent of time spent at office -----	20
How divided:	
Correspondence -----	38
Conference -----	38
Miscellaneous -----	24
Per cent of time spent in field -----	80
How divided:	
Supervising regular demonstrations -----	32
Other farm visits -----	26
At meetings -----	15
Short Course work -----	3
Organization -----	24
Official letters written -----	78,778
Articles relating to agents' work for publication -----	2,240
Different circular letters prepared by agents -----	1,130
Bulletins U. S. Department of Agriculture distributed -----	72,733
Circular letters sent out -----	76,365

Bulletins of Georgia State College of Agriculture distributed	71,847
Visits to schools relating to work-----	4,588
Assisting outlining agricultural courses in schools-----	725
Assisting extension schools or short courses-----	86
Total attendance at these schools -----	6,214
Total number days engaged in these schools-----	609
Farmers attending short courses at colleges as result of county agents' efforts -----	757
Boys attending agricultural or other schools or colleges as result of county agents' efforts-----	1,163
Visits of specialists from College or United States Depart- ment of Agriculture -----	1,308
Demonstrators, coöperators and club members having ex- hibits at county or community fairs -----	3,686
Number winning prizes -----	1,965
Demonstrations in truck or fruits-----	393
Farmers in counties keeping cost records: Complete 124, partial 1,431; total -----	1,555
Farmers practicing fall plowing as result of county agents' efforts -----	6,146
Farmers selecting seed -----	5,360
Farmers growing improved seed for sale-----	1,460
Wood lots improved -----	220
Farmers growing cane or sorghum for syrup-----	4,147
Value live stock, seeds, fertilizers and other products bought and sold coöperatively by farmers-----	\$6,005,531
Amount saved to farmers by thus buying and selling--	\$ 914,029

## BOYS' AGRICULTURAL CLUBS

Agricultural club work for boys consists chiefly of corn, pig, calf and wheat clubs, and is a part of the regular extension work of the Georgia State College of Agriculture carried on in coöperation with the United States Department of Agriculture. These clubs we like to designate "The Big Four" in Georgia. Some splendid results in potato and peanut clubs have already been made and doubtless these two clubs will continue to grow until they assume the same large proportions as "The Big Four."

The boys' club work is organized by the county agents in coöperation with the county school superintendents, the rural school teachers and parents. The business interests of the community aid in offering valuable premiums for the various clubs. The club work is a vital part of all community interests and is considered in the program of work of the farm bureau and community councils. A permanent committee is appointed by the farm bureau to promote the interests and a special division of the bureau is organized.

Boys may engage in any form of club work desired. The principal lines undertaken are an acre of corn, an acre of wheat, an acre of peanuts, an acre of cotton, one-fourth acre potatoes, one or more pigs, or one or more calves.. Each member must follow the given rules of the club work, and make and exhibit of his products

or animals at the community or county contests. A complete record and history of the crop or animal is kept with each item of expense and the value of crop or animal.

The following table gives interesting data relative to the boys agricultural clubs for the past year:

#### RESULTS IN BOYS' AGRICULTURAL CLUBS, 1919

Club	Enrollment	Total Production Bushels	Av. Yield Per acre Bushels
Corn - - - - -	6,189	68,558	46
Peanuts:			
Nuts - - - - -	212	2,084	40
Hay - - - - -	68	24 tons	1 ½ tons
Potatoes:			
Irish - - - - -	139	1,119	409
Sweet - - - - -	58	3,336	226
Wheat - - - - -	891	5,304	22
Peas (hay) - - - - -	110	297 tons	1 ton
Velvet Beans - - - - -	62	240	15
Cotton (lint) - - - - -	116	11,624 lbs.	410 lbs.
<hr/>			
Total - - - - -	7,845	61,929	
Pig Clubs - - - - -	6,793	432,400 lbs.	
Beef Calf Clubs - - - - -	718	64,102 lbs.	

Total ALL CLUBS - - - 15,356

This is the second year of a new publication by the Georgia State College of Agriculture, the Boys' Club Guide. Through its columns the club members were given special instructions in their various lines of work. Six editions, of twenty thousand copies each of this Guide, were published and put into the hands of the club members, teachers, and parents by the county agents. This is the high water mark in the amount of printed instructions prepared and sent out by the College. Record books were also printed and distributed in abundance by the College and the States Relations Office, and a great many Government bulletins on timely subjects were put into the hands of club members. It is a conservative estimate to say that no less than 150,000 pieces of mail were handled by the county agents dealing with boys' club work alone.

#### COUNTY SHORT COURSES

This year saw also the expansion of the short course idea. In the past only a few counties held short courses. This year each county agent in the state held a short course of from one to four days for his club members. These were usually held in conjunction with the home demonstration agents and her club members. The social feature of these county short courses was emphasized and a great deal of pleasure, as well as profit, was derived therefrom by the boys and girls. In some cases the boys and girls were taken in the homes of the people where the short course was held and kept the entire time without any cost to the club members. In



others, especially where the courses were held in small country villages or communities, the club members came in early in the day and returned to their homes at night. The agents tried in all cases to hold these courses in places well suited for picnics. Swimming, boat-riding, ball games, melon cuttings, and other forms of amusements were engaged in, and everyone present was made to have a good time. Nothing done to date equals these short courses when properly planned and carried out in keeping the interest of the club member at a high pitch. Great good will come from these in the future.

The club men and specialists attended as many of these short courses as possible, but the number of such courses in session at the same time made it impossible for all the county agents to have their help. In such cases, the agents used local talent and often called on one or two county agents from adjoining counties to assist them.

Practically the entire membership of each county was reached by these courses, which consisted of practical lessons and demonstrations closely associated with the club work through the day and illustrated lectures at night with slides showing Georgia boys and girls busily engaged in growing corn, wheat, pigs, calves, potatoes, peanuts, and other crops.

### DISTRICT SHORT COURSES

In addition to the county short courses in each county, district short courses were put on at all district agricultural schools, where there is located a district agent in extension work. To these courses were sent from two to twenty boys from each county in the agricultural school district. They were selected for meritorious work in some of the clubs and their expenses were borne by the county. These courses were also of four days duration and the subject matter given was worked out by the principal of the school and the district agent. It consisted principally of demonstrations to fit the boys' needs. All the equipment of the district school was placed at the disposal of those doing teaching, and it was supplemented with other equipment from the Georgia State College of Agriculture.

The annual state short course for prize winners began as soon as club work was launched in 1910. This course has grown in numbers up to the present time and is responsible for county and district courses being organized. The boys making the best records in corn, pig, calf, wheat and other clubs are selected and sent to the state short course at the Georgia State College of Agriculture. This is a ten days course and one highly sought after by club members. The expenses of the boys are borne by scholar-

ships which are furnished by counties, fairs, railroads, bankers, business men, and other agencies.

This course is held while the regular students are away on vacation. The boys stay in the dormitories and get their meals at Denmark Dining Hall. One hundred and five prize winners registered at the 1919 session. More than one hundred club girls were here at the same time and the old campus was crowded with boys and girls who had made good in club activities. Many of these will return when ready for college.

There are several students now registered at the Georgia State College of Agriculture in the degree courses who were once club members. They won a scholarship to this course and got an insight into what the future holds out to them if properly prepared and are now making that preparation.

Closely associated and akin to the above mentioned short courses is the Southeastern Fair School which is held annually at the Southeastern Fair Grounds, Atlanta, Ga. In connection with the fair, a competitive examination, open to all boys in the county from fifteen to eighteen years of age, based on agricultural subjects is held by each county agent, and the two boys making the best examination are selected and sent to this fair school which lasts one week. The club boys usually win out on the examination and ninety per cent of the boys attending in 1919 were club members. The exhibits were carefully studied by these boys and they saw much that will do them a great deal of good and they will never forget.

For instance, they saw and studied some of the best live stock in the world and got a vision of what Georgia will be when these pure bred animals cover our hills and our valleys. The pig and calf club boys are growing some of these live stock already and are blazing the way that thousands of others will soon follow.

### HOME BUILDING ACTIVITIES

Following the withdrawal of war emergency appropriations a reduction in number of counties and workers organized for home demonstration activities was necessary. The number of organized counties was reduced from 104 to 87. Everything possible was done to retain efficient workers and strengthen the organization. The supervising and specialist force has included the state agent, two assistant state agents, six district agents, three workers who devoted their time to work in teachers institutes and unorganized counties, and a dairy specialist and poultry club agent, the latter two on duty for a part of the year only.

The most notable advance in county and community organization

was the perfecting of community councils and county advisory boards of the farm bureaus. While not all counties have perfected the women's part of these organizations, the benefits of their work in securing county appropriations, carrying on community programs of work and supporting the agents are already apparent.

From November 1918 to February 1919 were held at the College of Agriculture the first six weeks short courses with instruction in English, Dairying, Poultry Husbandry, Horticulture, Foods and Cookery, Clothing and Organization and Conduct of Home Demonstration Work. There were 95 agents enrolled in these courses carrying college credit work. The quality of service since has been markedly improved by this study. Six workers are now on leave pursuing degree courses in Home Economics.

### GIRLS' CANNING CLUB WORK

During the season just closed there were organized 6,553 girls to conduct demonstrations with tenth-acre gardens. Among these girls there were organized 499 clubs with a total attendance during the year of 21,041 girls. Of the girls enrolled 2,758 rendered reports in acceptable form.

Notable progress has been made in the planting of perennial gardens by the girls and women. In Tattnall County 65 girls set 20 muscadine grape vines and four fig bushes each making a total of 1,300 grape vines and 260 figs planted. In addition to work with grapes and figs, asparagus, strawberries, blackberries, dewberries and in some sections raspberries are being planted. Each girl is required to set out some perennial not later than the spring of the second year, thus giving her a crop to work with by the time she has been in the club three or four years.

### RESULTS FROM GIRLS' GARDENS

Girls having perennial gardens or orchards on one-tenth acre -----	560
Total yield in pounds of fruits and vegetables-----	1,636,585
Jars canned -----	344,032
Total value of one-tenth acre products-----	\$104,054.44
Additional quarts canned -----	91,119
Total value additional products -----	\$ 21,145.30

### DEMONSTRATIONS IN BEE KEEPING

An interesting piece of work that has been done this year has been the demonstrations in bee keeping. In almost every county one or two demonstrations have been carried on, there being a total of almost a hundred women and girls in the state who have raised bees as demonstrations for their counties under the direction of the county home demonstration agent.

## RESULTS OF OTHER CLUB ACTIVITIES

Canning club uniforms made-----	2,300
Fly traps made -----	322
Pieces miscellaneous equipment -----	5,948
Demonstrators in grape work enrolled-----	245
Grape vines planted -----	2,258
Demonstrations with special vegetables-----	767
Short courses held -----	44

## RESULTS OF OTHER ACTIVITIES

The annual state short course for prize winners was held at the College of Agriculture in August 1919 and was attended by 108 girls, three of whom were not prize winners but came at their own expense. In addition several women who are vitally interested in girls' club work came and stayed the whole time and for them some separate conferences and demonstrations were planned.

Quite a feature was made of the county short courses this year; these were held in most of the counties and were organized by the county and district agents working together. Nearby agents were called in to help with the instruction and this service was returned at a later date by the agent in the county in which the short course was being held. These short courses took the form of camps, in some instances, while in other cases the girls were entertained by the women of the county seat or were housed in the dormitory of the county high school. As many as 50 girls were present at one county short course.

In like manner district short courses were held at the district agricultural schools. These were in charge of the district agents who called in nearby county agents to help with the instruction. The girls were divided into classes according to their age in club work and in this way definite advancement was made in perfecting the skill and increasing the knowledge of the girls.

Instructions for women along lines of cookery, food preservation, dairy and poultry work, sanitation, and health were also given in the district agricultural school short courses or extension schools.

## POULTRY CLUBS

In poultry clubs 33 counties reported club members; 725 girls and 609 women being enrolled. Of these, 507 took charge of the entire flock; 662 raised feed for the flock; and 93 made brooders. The average number in the flock was 49. Reports show that 638 purchased purebred eggs; and 1,883 dozen eggs were preserved in water-glass.



## HOME DAIRY WORK

At the close of the war emergency the specialist in home dairying had to be discontinued and it was impossible to give as much assistance to the county agents as had been given during the time when special campaigns were being carried on in milk conservation and making of cottage cheese.

In ten counties 13,749 pounds of butter were made under demonstration instructions and more than 200 demonstrations were given in churning and in the care and use of milk. Twenty schools report definite use of milk in the school lunch. Reports say that 1,228 families are using more milk than before. The improved equipment purchased in these ten counties includes brushes, moulds, milking pails, butter workers, strainers, cheese pressed, shot gun cans, thermometers, iceless refrigerators, and separators, a total of 642 pieces of equipment. Of this equipment 54 iceless refrigerators and 80 thermometers are reported as having been purchased.

Muscogee County reports 12,000 pounds of cream sold, butter contests held, systematic inspection of dairy farms and great improvement in sanitary facilities for handling milk in the homes and barns.

## WOMEN'S WORK

### Demonstrations Given in Utilization of Food Products

Vegetables -----	804
Dairy products -----	239
Poultry products -----	432
Invalid cookery -----	164
Child feeding -----	496
Bread making -----	459
<b>Total -----</b>	<b>2,593</b>

## RESULTS FROM WOMEN'S GARDENS

Gardens, orchards and vineyards established -----	8,016
Quarts of fruits and vegetables canned -----	617,304
Pounds of fruits and vegetables dried -----	42,387
Pounds vegetable brined -----	26,454
Miscellaneous products -----	297,068

## MISCELLANEOUS HOME DEMONSTRATION WORK

Women making bread in their homes under supervision of agent:	
Quick breads -----	775
Yeast breads -----	608
	<hr/>
	1,383
Number of organized women's clubs -----	401
Total attendance at demonstrations -----	45,027
Demonstration centers established -----	97

Women keeping household accounts-----	295
Women giving demonstrations to their own clubs and to individuals -----	637
Home Improvement Activities:	
New homes built as demonstrations-----	38
Old homes remodeled -----	210
Home re-arranged for convenience -----	230
Floors and walls improved -----	234
Lighting systems installed -----	158
Water systems installed -----	111
Homes screened -----	549
Improvement of Home Grounds:	
Trees planted -----	7,877
Lawns, vines and other plantings -----	2,057
Fences repaired -----	308
Home conveniences, bought or made at home-----	2,474
Laundry Equipment Installed:	
Washing machines -----	60
Other equipment -----	152
Clothing Demonstrations:	
Demonstrations given in remodeling garments, dyeing, millinery, and rug making -----	148

## CHILD FEEDING AND SCHOOL LUNCH WORK

Following the work done in the state by a specialist on child feeding the agents gave demonstrations and lectures on this subject to home demonstration clubs and to parent-teacher associations, with the result that women in these organizations are including the study of child feeding in their yearly program and are asking for more help from the agents.

By means of the school lunch the county home demonstration agent has been able to aid materially in securing better food and better health conditions for the rural school boy and girl. The work is done coöperatively by the agent, parents, teachers and children. Different organizations such as the parent-teacher associations and the women's clubs are helping to produce results.

The special agents who work in teachers' institutes and unorganized counties have secured good results in improvement of school lunches. Through the institutees, night schools and visits to schools, it has been possible to reach parents, teachers and pupils. All have manifested interest in improving the health of the child through better food.

Whenever time has allowed, physical examinations have been given to reveal to parents and teachers the real condition of the children. By means of the height and weight standards, it has been found that the average of underweight of children in north Georgia ranges from 40 to 50 per cent. An examination of the children in three schools in one county revealed 49 per cent of the children underweight. Examinations in two other counties revealed

43 and 46 per cent, respectively. Had minor symptoms been taken into account, a much larger percentage would have been found to be undernourished.

The attendance was checked up in the above schools and it was found that the malnourished child is always the one that stays out of school, and is always the one who is several years behind in school. In a school of 51 pupils, 405 absences were recorded in one term.

At the state fairs the Georgia State College of Agriculture gave information and demonstrations on child feeding for children of the pre-school age. The hundreds of mothers who came to have their children examined were equally interested in seeking information regarding the diet of their children. Numbers of mothers did not know that mother's milk is insufficient for children twelve, fifteen and eighteen months of age. Scarcely any of them knew anything of the pasteurization of milk and were giving the ready prepared foods. Consequently, most of the children were either over or under weight. Very few of them knew anything of the value of fruit juices and vegetable pulps for the baby. All seemed appreciative of the help given them.

The agent in Screven County writes: "School lunch demonstrations have been given in all the schools in the county. Three schools have kept the hot lunch going. Sentiment is in favor of this and schools are being equipped for it."

From Washington County: "Three schools have purchased stoves and other equipment for serving hot lunch to the children. The hot lunch will be made permanent in all the schools."

Seventy-five schools in the state are already equipped for serving school lunches and for carrying on regular work in domestic science through the home demonstration agents.

### CIVIC IMPROVEMENT

Community organization has brought about interest in community betterment and made possible the unity of action necessary to get things done. Campaigns have been carried on for community hygiene, for sanitation, and for recreation. Demonstration centers have been used for community programs with illustrated lectures, using stereopticon slides.

Consolidation of small country schools is being brought about in nearly every county through the coöperation of the agent with county boards of education. These boards have fostered our work for years and are now finding results that could never have been accomplished without the influence of the home demonstration

work. In Muscogee County prizes of as much as a hundred dollars have been awarded for community fair exhibits and turned into funds for consolidated schools.

County-wide movements for agriculture and home economics have grown out of the canning club contests and county fairs promoted by the work of county agents and home demonstration agents. More definite plans for marketing products and more milk in every home are problems being solved through county organization.

The state fair exhibits in both Atlanta and Macon included demonstrations in various phases of home management, food values and the daily food requirement, the efficient kitchen, the laundry, home dairy work, clothing, and household sanitation.

### **EXTENSION SCHOOLS AND FARMERS' INSTITUTES**

Extension schools or short courses were held in the summer of 1919 at the following district agricultural and mechanical schools: Americus, Carrollton, Douglas, Tifton, Granite Hill, Powder Springs and Madison. The attendance was approximately 6,000, eight sessions to the school with average attendance of about 1,000.

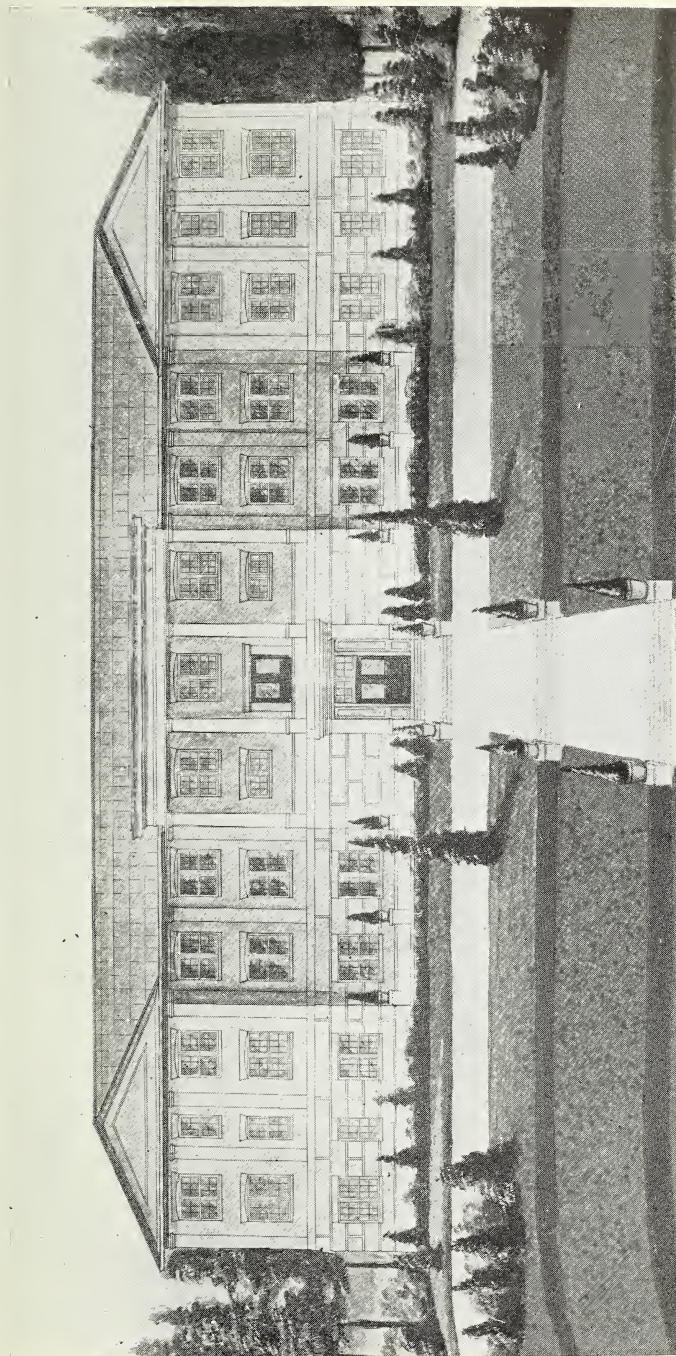
Systematic formal instruction was carried on at each one of these schools for a week, the lecture work being almost identical in type to that given at the winter short courses at the Georgia State College of Agriculture.

These extension schools tend to focus the interest of the people of a particular congressional district upon their own district and mechanical school in a manner that will promote agricultural instruction in every district of the state. The College is limited in its ability to extend very materially this work because of the small amount of money at its command. Every effort will be made, however, to develop this work, as it is an essential form of constructive extension teaching and one that has gained the appreciation of the intelligent farmer who is seeking for specific knowledge in scientific agriculture.

### **SPECIAL MEETINGS**

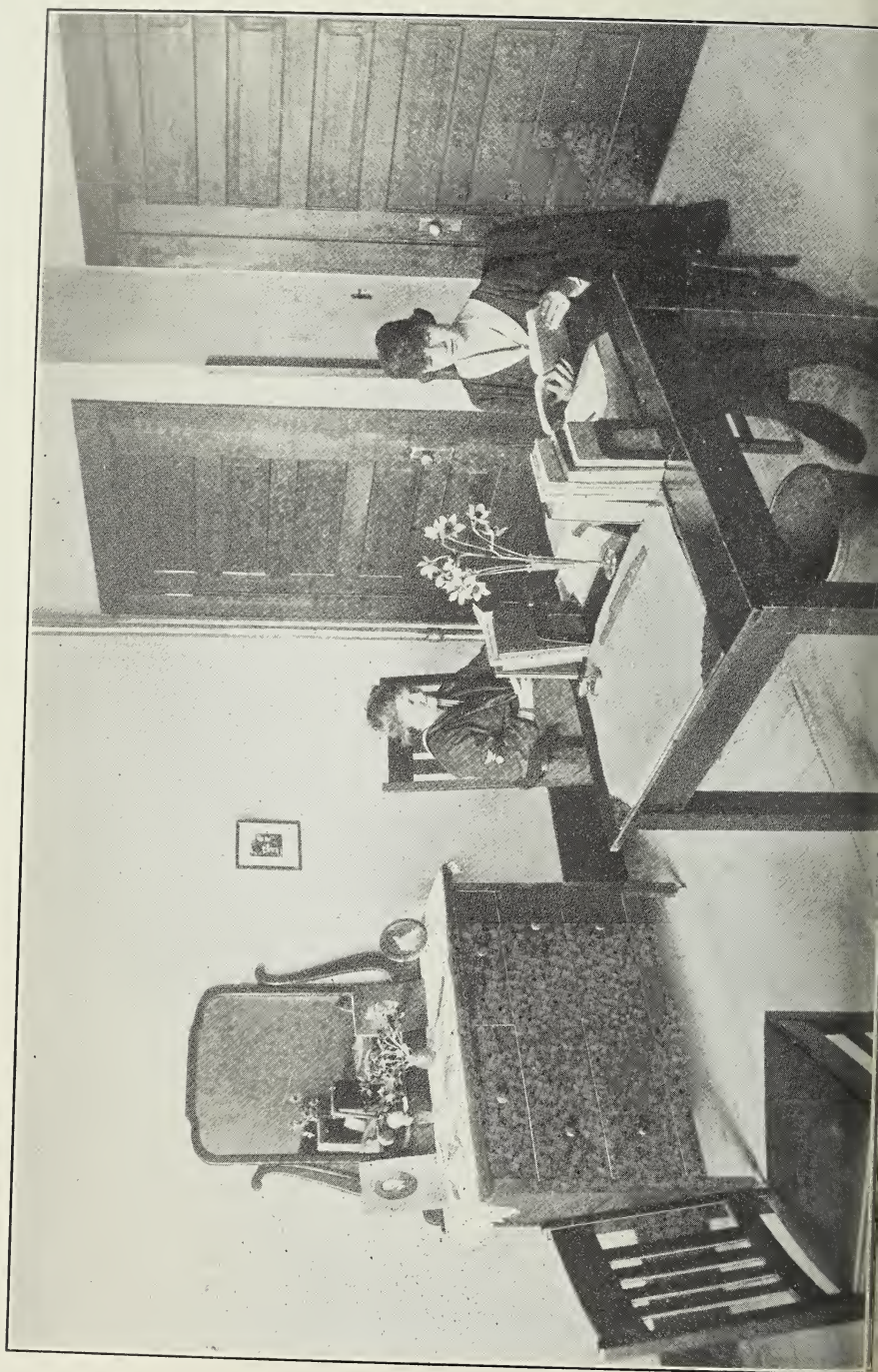
Farmers' institutes and special meetings were held in February and March 1920 in 62 counties. The principal subjects discussed at these institutes were cotton farming under boll weevil conditions, building permanent pastures, tobacco growing, sweet potatoes, live stock and dairying. There was an estimated total attendance of 62,000 people with an average attendance of 100 people at each meeting.





The Woman's Building which will be occupied in June 1920. It contains class rooms, laboratories, laundry, gymnasium, swimming pool, and comfortable home-like rooms for students.





The meetings were highly successful and benefits far-reaching. The counties in which the meetings were held are as follows: Jasper, Putnam, Baldwin, Greene, Wilkes, Warren, Hancock, Columbia, Richmond, Burke, Washington, Clarke, Oconee, Madison, Hart, Elbert, Oglethorpe, Jackson, Barrow, Gwinnett, DeKalb, Morgan, Walton, Newton, Rockdale, Fulton, Cobb, Campbell, Douglas, Butts, Paulding, Polk, Floyd, Bartow, Gordon, Whitfield, Catoosa, Walker, Clayton, Fayette, Pike, Upson, Talbot, Muscogee, Marion, Coweta, Carroll, Troup, Brooks, Colquitt, Early, Dougherty, Sumter, Dooly, Irwin, Coffee, Pierce, Chatham, Jefferson, Candler, Laurens and Dodge.

In addition to the extension schools and farmers' institutes six special agents, three men and three women have coöperated with the rural school superintendents in attending teachers' institutes, educational meetings, illiteracy campaigns and other lines of work in connection with the rural school child and his parents. More than one-half the counties in the state were visited by these special agents.

## MARKETING

A great deal of educational work in marketing has been carried on through extension schools, farmers' institutes, agricultural fairs, the public press, market associations, public meetings and other mediums. Plans have been furnished for grading, packing and proper storage of various products. Demonstrations have been held at strategic points. Model storage houses and packing sheds have been exhibited at the fairs and attracted the attention of thousands of people.

Another feature of the market work has been the formation of county agents' exchanges in which lists of products for sale have been distributed. Also lists of needs in various counties have been given, in this way the county agent in one county is enabled to have his farmers exchange with farmers in another county. Furthermore, this method of exchange is handled by county agents within a county in which farmers in one community are kept posted on the needs or surplus products in another county. In many instances a nearby market has been found for almost any supplies in the hands of the farmers.

Coöperative marketing of hogs and sweet potatoes has received the greatest amount of attention. Coöperative hog sales have been held throughout the state wherever there was a surplus of hogs raised for packing plants. Many thousands of hogs were handled in these sales by the county agents and specialists with very considerable saving in money to the farmers. A complete system of grading pens has been built at various points. Hogs are assembled,

graded and loaded at these pens on special market days. This work has proven very popular with farmers and has received the encouragement of business interests.

Next to the marketing of hogs, potato storage houses have been constructed through the efforts of county agents and market specialists in all sections of Georgia. The minimum capacity of the storage houses built by the plans furnished from the College of Agriculture amount to three-fourths of a million bushels. Sweet potato growers are now forming an organization for the purpose of putting a market agent in the field to dispose of their products.

The peanut crop this year, raised for the oil mills, amounted to several million bushels. A constructive piece of work in the best methods of picking, grading and marketing the peanuts has been carried on by the agents and specialists. Other lines of coöperative buying and selling as shown by the following table have been carried on by the county agents.

### CO-OPERATIVE SHIPPING DONE BY FARMERS THROUGH COUNTY AGENTS IN 1919

The coöperative shipping done by Georgia farmers in 1919 through the county demonstration agents reached a total of \$6,005,-531.13 with a saving to the farmers of \$914,029.37, conservative estimates show. These figures cover only the large shipments and take no account of the thousands of small transactions engineered for the farmers by agents.

The coöperative buying covers those commodities which increase or make less expensive, farm production, such as fertilizers, cattle, feeds, seeds, and other commodities.

The following analysis of the work, item by item, is taken from the annual report of county agents:

Article	Sold	Value	Saving
Hogs - - - - -	186½ cars	\$367,273.13	\$ 33,044.17
Cattle - - - - -	41 cars	67,600.00	5,750.00
Peanuts - - - - -	300 tons	48,000.00	3,000.00
Corn - - - - -	20,000 bushels	25,000.00	3,000.00
Melons - - - - -	9 cars	1,530.00	-----
Misc. products - - - -	2 cars	2,400.00	550.00
Wool - - - - -	400 pounds	300.00	100.00
Syrup - - - - -	4 cars	1,520.00	480.00

		\$513,623.13	\$ 45,944.17
Article	Bought	Value	Saving
Fertilizers - - - - -	2,761 cars	\$5,483,131.40	\$ 865,878.79
Gilts and boars - - -	1 car	775.00	175.00
Cattle - - - - -		4,800.00	800.00
Miscellaneous seeds -	1,129 bushels	1,611.00	527.50
Spray equipment - - -		386.00	79.00
Syrup buckets - - - -	12,000	1,183.00	617.00
Small tools - - - - -		21.60	12.00

	\$5,491,908.00	\$ 868,085.20
Grand total, bought and sold, valued at-----		\$6,005,531.13
Grand total, bought and sold, saving-----		\$ 914,029.37



## CO-OPERATIVE ENTERPRISES

**Agronomy.** During the past year a profitable farming campaign and a boll weevil campaign were held in coöperation with county agents. Farmers were more anxious than heretofore to get information to help them meet the problems pressing on them at the present time. The Soil Improvement Committee of the Southern Fertilizer Association aided in the better farming campaign held during February and March. Fourteen counties were visited and 1,600 people were reached. Pastures and grazing crops, tobacco growing, the use of calcium arsenate and general methods of fighting the boll weevil, farm management, and fertilizers were presented and discussed. Their presentations were very brief but definite, and illustrated by a series of charts.

During the past year some extension work was taken up based on results of the fertilizer tests, and fertilizer and lime demonstrations have been arranged. Thirty requests from county agents for these tests have been sent in.

Extension work in drainage and terracing has been carried on.

In tobacco extension work there has been considerable interest because this is a new crop and farmers are not familiar with growing and curing it. The specialist spent a good deal of time in connection with tobacco sales warehouses during the marketing period. In 1919 there were 19 tobacco warehouses. The tobacco industry now seems to be permanently established in Georgia and there are four re-drying and stemming plants under process of construction at Tifton, Douglas, Fitzgerald and Savannah. The specialist has been in touch with 3,000 tobacco growers in coöperation with county agents and otherwise.

Pastures and hog grazing crops have received much attention during the past year. The greatest limitation in the development of pastures has been the lack of seed. Coöperation has been had with the Office of Forage Crop Investigations at Washington and it is expected that large quantities of carpet grass seed will be grown in Louisiana and Mississippi with a plentiful supply of seed available next year.

In cotton industry work, the use of calcium arsenate in fighting the boll weevil was continued during the present season. The profits from calcium arsenate poison varied from nothing to over \$20.00 per acre during last season. The principal difficulty in the way is the lack of necessary machinery and the right kind of calcium arsenate. The greater percentage of calcium arsenate analyzed does not contain the proper percentage of soluble material.

Special effort will be made next season to place Meade cotton in



**Animal Husbandry.** Two phases of beef cattle extension work have received particular emphasis this past year, steer feeding demonstrations and herd management demonstrations. Ten steer feeding demonstrations comprising 438 head of cattle were carefully supervised in the counties of Jackson, Hall, Rabun, Bibb, Laurens and Grady. The feeds used were sorghum pomace, silage, corn silage, cane pomace silage, velvet beans in pasture, molasses, cottonseed meal, cottonseed hulls, corn and hay. These feeding demonstrations were carried on by farmers under the direction of field specialists and county agents. Information was given along the lines of feeding to farmers not carrying on special demonstrations. Altogether 1,023 head of steers were fattened for market during the past winter under the direction and supervision of the specialists. Eleven herd management demonstrations have been arranged for this year, six with pure bred cattle, and five with grade herds totaling 353 head. These demonstrations are in the following counties: Catoosa, Bartow, Gordon, Newton, Harris, Floyd, Thomas, Dougherty and Irwin. A few trips were made with farmers to visit the demonstrations.

Twenty-seven coöperative hog sales were held totaling a value of \$111,653.00 worth of hogs. Many other coöperative sales were held. In some instances five cents per pound increase was secured over the local buyers.

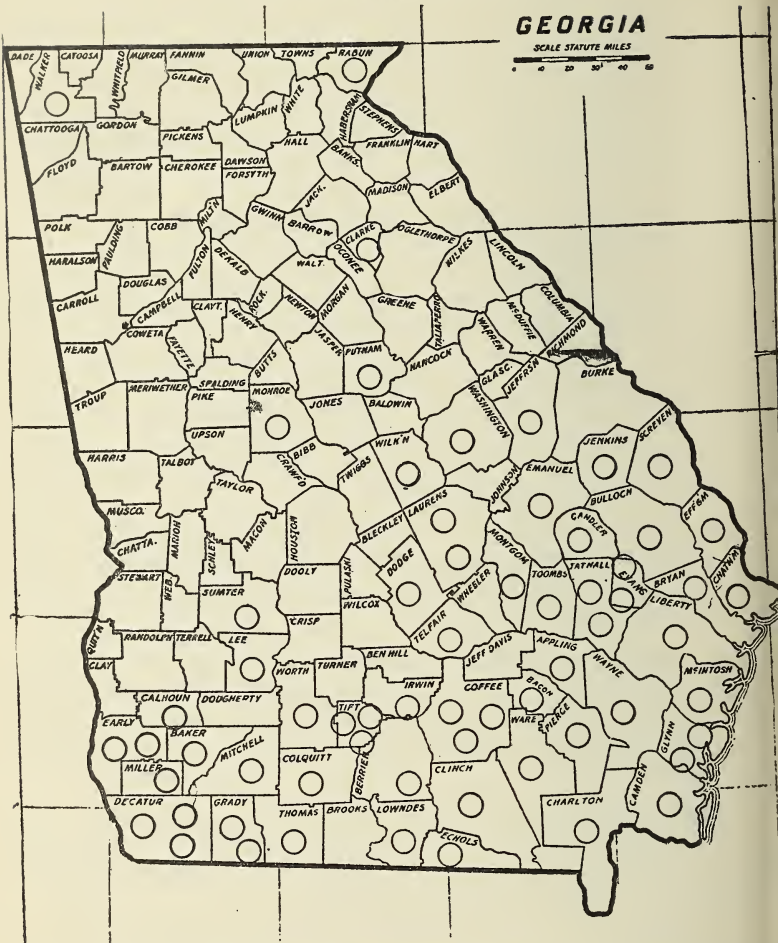
The records show that 121 breeding animals and 75 pigs have been purchased through the specialists of the College at a total value of over \$10,000. Swine demonstrations have been carried on in 17 counties showing the value of permanent pastures and grazing crops.

During the last year the following general lines of dairy work have been undertaken: cheese factories, coöperative bull associations, cow testing associations, the Jersey cattle breeders association, and the marketing of dairy products.

Three cheese factories are now in operation and another nearing completion, all of which are in the mountainous or semi-mountainous district. Cheese factories are calling for better cows and registered bulls in each community. Permanent pastures and silos have received attention. Many improved grade cows, pure bred bulls and a number of pure bred cows have been purchased through the efforts of the dairy extension specialist.

One of the greatest accomplishments of the extension work during the last year was the organization of the Georgia Jersey Cattle Club with a membership of 400 owners of pure bred Jersey cattle. Creditable records have been secured in cow testing work.

## PASTURE DEMONSTRATIONS



The circles show the location of demonstrations with pasture grasses

**Horticulture.** Special phases of extension work in horticulture for 1920 have been sweet potato culture, curing houses, fall Irish potatoes, home orchard clubs, rural home and rural school landscaping. Many sweet potato clubs have been formed and much interest is manifested throughout the state in this line of work. Accurate accounts of the demonstrations are being kept as to yield, expenses, and other items of interest.

**Forestry.** The principal interest in forestry extension work has centered around the creosoted fence post project. Many agents



have been assisted in staging demonstrations. Two firms have undertaken the treatment of fence posts as a commercial proposition and many local plants have been installed by farmers. The high price of wood, increase in farm needs for posts and fuel and the drainage of timber supply of the country is beginning to call for information regarding woodlands.

**Poultry.** Poultry extension work has been confined largely to poultry club work, both among boys and girls and among adults. Influential citizens of the towns and counties show a great interest in the poultry clubs and give considerable attention to the club members. The president of the poultry Club of Washington County has recently purchased 24 pure bred fowls at a cost of \$500.00. Other plants of similar nature are being developed. Poultry judging contests are held at the various plants by the club members.

### DIVISION OF AGRICULTURAL CHEMISTRY

The instruction work in the division has been handicapped more than ever before on account of the increasing number of students and the lack of laboratory space. The limit of capacity to take care of more students has about been reached.

Soil surveys were started in six new areas during the past winter but forty per cent of the men assigned to Georgia by the Bureau of Soils resigned, before or soon after coming to the state, and the work was necessarily abandoned in three of the areas. From all indications, Monroe, Screven, and Mitchell Counties will be completed by June 1, 1920.

The survey of Rabun County, which was started September 1919 and discontinued when the winter season came, has been resumed and we hope to complete the county during the summer.

During the latter part of August 1919, Floyd County was finally completed and the work turned over to the Bureau of Soils for publication. This work had remained over from 1917 on account of unforeseen circumstances.

Floyd County is a particularly interesting county from a soil standpoint on account of the great diversity of the soils. It is situated in the Appalachian Valley and is underlain by soil forming materials of widely different character, so that a large number of interesting features in soil formation are found.

The classification of the soils of the Appalachian Valley was not as well worked out as it might be and, therefore, Floyd County was chosen as a basis for future classification. Among some of the most radical changes made in the soil classification was the inclusion of identical soils under one type regardless of the topog-

raphy. Formerly mountain and valley positions were the basis of different series although the soil material was identical. The mapping of the Norfolk, Orangeburg and Greenville series in the Appalachian Valley is the most radical departure made in soil classification for years. This sets aside arbitrary lines for the occurrence of soils and establishes the principle of mappings soils upon soil characteristics regardless of location. The Norfolk, Orangeburg and Greenville types as mapped in this county are identical in characteristics, both in chemical composition and in the material from which they are formed as the same types formed in the Coastal Plains, and if they were not so classified it would be necessary to have identical soils with different names on account of no other reason than that they were located outside of the Coastal Plains section of the state. The areas in themselves are fossil areas of Coastal Plain but are better termed outwash plains.

The Soil Laboratory has been making good progress during the last year. The reports of the chemical analyses of the soils of Crisp and Turner Counties, which were in press at the time the last annual report was made, have been issued. The analytical work on the samples from Wilkes County has been completed and this report is now in the hands of the editor.

The analyses of the samples of soils from Madison and Lowndes Counties have been made. The publication of these reports has been held up until the physical reports of these counties have been issued by the Bureau of Soils, when the maps will be available.

The Meriwether County samples are being analyzed at the present time and the work is progressing rapidly toward completion. The report on the analyses of the soils in this county will be ready for publication during the summer.

During the year soil samples have been collected for analysis from Oconee, Floyd and Pierce Counties.

Preliminary analyses were made of a number of the samples from Floyd County at the request of the Bureau of Soils to help determine the proper classification of the soils in the county. The results confirmed the classification as made by the Bureau of Soils and showed that the chemical composition should be considered in some cases as well as the physical characteristics in the mapping of soils.

## **DIVISION OF AGRICULTURAL EDUCATION**

The division of agricultural education has trained and placed forty-five teachers of vocational agriculture in thirty-six counties of the state. These teachers of secondary agriculture are located in the best rural high schools in the state. Through these trained

teachers the College is rendering a real service, not only to agriculture in these communities, but to the rural educational leadership of the state as well.

Recent state legislation to promote consolidation of rural schools has laid the foundation for a more rapid development of teaching agriculture in high schools throughout the state. The state authorities have sent out a call for at least twenty-five additional men during the year beginning next July. Our greatest problem in this regard will be to find enough men to train for this field of work.

A fund of eight thousand dollars has been raised in Clarke County to establish a practice school for this division at Winterville, a rural community seven miles east of Athens. A building is now under construction and will be utilized exclusively for supervised teaching in agriculture and home economics. With these added facilities, much more work in teacher training can be done.

One full time man has been maintained constantly in the field during the year to aid the teachers of vocational agriculture in working out their problems in the schools. In this way an intimate relation is being built up between the agricultural teachers and pupils and the College of Agriculture. In addition, an understanding of actual school conditions under which our men teach, is obtained. This information is invaluable to the efficiency of the work of the division.

During the summer of 1919, thirty-three teachers of agriculture came to the College for regular instruction in methods and materials for teaching agriculture. The summer course lasted five weeks, and so successful has been the results in the actual school work of the year that it will be continued indefinitely. More than fifty men will be in attendance during the summer term beginning June 22, 1920.

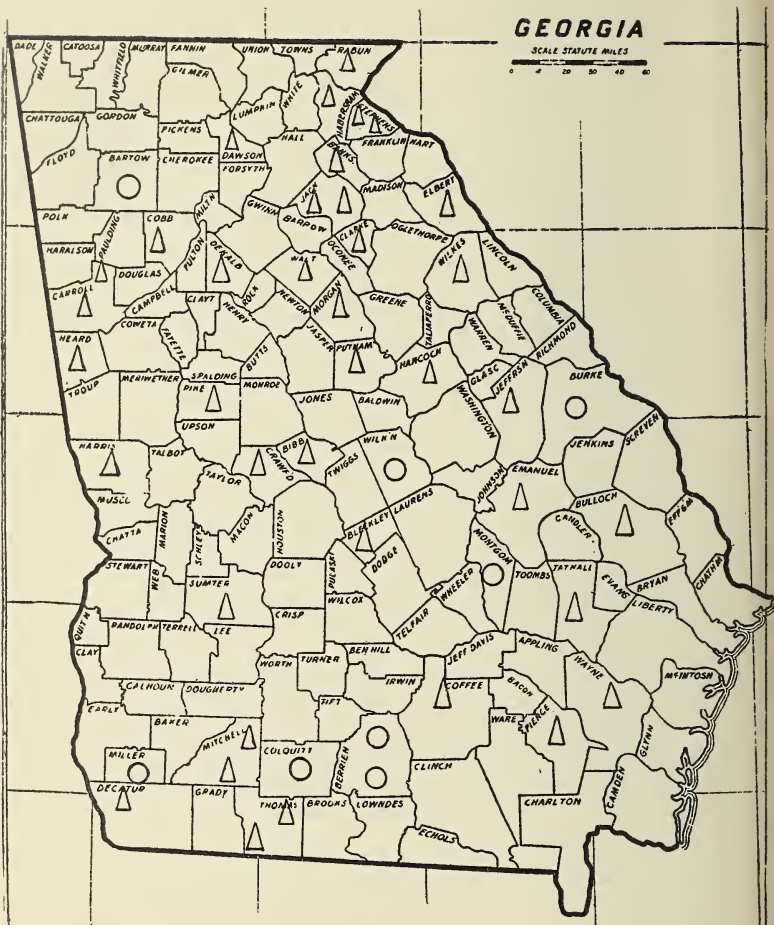
Some community studies are now being made in Clarke and Oglethorpe Counties in coöperation with the Division of Rural Life Studies of the United States Department of Agriculture. This work has not developed far enough yet for its findings to be published, but the results of these studies will be made known in the near future.

## DIVISION OF AGRICULTURAL ENGINEERING

The division has given instruction during the year to a maximum number of students, the enrollments in classes being much larger than in former years. Increasing interest is being shown in tractors, gas engines, black-smithing, and carpentry. Tractor manufacturers have supplied three standard make tractors free of charge for student instruction.

## GEORGIA

SCALE STATUTE MILES



Under the supervision of the head of the department the Woman's Building has been erected. The road which will be built in front of the building in a semi-circle joining the main drive at the Agricultural Engineering Building and the Animal Husbandry Building was surveyed and mapped by engineering students.

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which will house the cavalry unit. There will be room for 68 horses and for the necessary feed and attendants. This building should be completed by the first of August.

The addition of another man to the extension force of the division has enabled it to better care for the countless demands made upon us for help in the erection of farm buildings. During the year 30 new designs were drawn and traced, 1,000 blue prints with 550 designs sent out, and 96 trips made to lend assistance in the erection or remodeling of farm buildings.

Nine terracing demonstrations were given with an approximate attendance of 1,000 people. Other demonstrations were planned but continued rains will delay them until another season. Eighteen farm machinery demonstrations were held with an estimated attendance of 36,000.

### DIVISION OF AGRONOMY

For the session of 1920-1921, cotton grading work that has been given for a number of years will be expanded and a course will be offered during the collegiate year for which there will be a three hour credit. There seems to be a growing demand for this course both among the four year agricultural students and also among the students of the school of commerce.

The work in farm management has been rearranged, and hereafter will consist of a course in rural economics in the sophomore year, elementary farm management in the junior year, and advanced farm management in the senior year. This will give students an opportunity to secure training in this line of work that will fit them for numbers of positions that are opening up at this time.

Work with calcium arsenate in fighting the boll weevil will be continued through the present season. There has been a large interest in this work during the last winter, and unfortunately not as many machines have been procured as it was hoped would be possible earlier in the season. Apparently there will not be very much interest in this particular kind of work in the area in which the boll weevil invaded last fall, but in the areas where the boll weevil has been present for some time a considerable amount of interest is being taken in the work.

The statistics show that in 1918 over 52,000 bales of Sea Island cotton were produced, and in 1919 only a little over 6,000 were produced. Investigation made through a considerable portion of the territory from Valdosta to Statesboro revealed only three areas of Sea Island cotton which totaled only eleven acres. It is evident that the boll weevil has practically eliminated the production of Sea Island cotton.

A recent canvass of the situation reveals the fact that we will

have this year between 1,500 and 2,000 acres of Meade cotton grown in this state. Most of this is from seed that was inspected last year, and with reasonable precautions there should be a sufficient amount of Meade seed available for the season of 1921 to plant between 30,000 and 40,000 acres. A special effort will be made to place this cotton as a substitute for the Sea Island cotton in the territory in which the Sea Island was formerly grown. From the present indications there will be an almost unlimited demand for this cotton. While there is some prejudice against it, yet there seems to be no good reason why it cannot be successfully used in place of the Sea Island.

An effort is being made to standardize this cotton at 1½ inches, and it should be possible in the next few years to accomplish this. To get the mills acquainted with the Meade cotton, a circular was put out through the Georgia Breeders' Association calling attention to the staple and some of the qualities of the cotton, also indicating where this cotton should be secured.

The present high price of rice is again stimulating an interest in this crop. While a great many of the old rice fields are in such a condition that it is not possible to bring them immediately into use, there seems to be no reason why a considerable acreage of rice should not be grown again in the state. On one plantation investigated by the division tile drainage and modern machinery are making possible the production of rice on a profitable basis. In addition to the old rice fields there is a considerable body of land in the southeastern section of the state in the flowing artesian area that is estimated at approximately 1,000 square miles that could be devoted to rice production with artesian irrigation. The United States Department of Agriculture has been interested in this matter, and it is hoped very definite work can be started during the next year.

All of the areas that were located in December of 1918 for pasture work have been seeded. It was not possible during the season of 1919 to secure the seed of some of the grasses. These were secured, however, early this spring and the seeding completed on all of the areas. A meeting was held in March by the packers and railroad men and representatives of the Land Owners' Association looking to developing the investigational work in grasses and forage crops to as large an extent as possible. This matter has been referred to the Georgia Association and they have adopted it as one of their projects and it is hoped that another season a considerable amount of work can be started.

Much interest is evidenced in the tobacco industry of the state, and while the acreage is reduced probably something like 15 per cent this year, the necessity of producing tobacco of quality is very much better understood. The efforts of the division will be directed

during the year in helping to produce tobacco of a superior quality. Some of the larger tobacco concerns are showing their belief in the new projects and it is hoped that in another season a considerable sum of money will be spent in stemming and redrying plants.

Coöperative studies in the cost of producing cotton were made in the spring of 1919 with the Office of Farm Management. These are being repeated this spring in Greene and Laurens Counties. One other area, not yet decided upon, will be included in this study.

Coöperative work with the Office of Rural Engineering has continued. It is unfortunate that Mr. Harris, who represented the division, resigned, and it has not been possible to put anyone in his place. Coöperative arrangements with the division of agricultural engineering have been made so that one of their men can devote his time to drainage work.

### DIVISION OF ANIMAL HUSBANDRY

During the last year eight men have resigned from the Animal Husbandry Division and of necessity this has militated against the most effective work. However, progress has been made in many directions and the work the College has done along the lines of animal production is reflected in the number and value of animals now produced in the state of Georgia. It is gratifying to note that during the last International Live Stock Exposition held in Chicago the grand championship for a Hereford bull was won by a Georgia breeder on a bull that was grown out under Georgia conditions. It is also worthy of note that the grand-champion Duroc-Jersey boar was bred, owned and exhibited by Georgia breeders.

Coöperative hog sales have taken an appreciable part of the time of the swine specialist. During the year 27 coöperative hog sales were held at which the farmers received a total of \$111,653.00 for market hogs. Through these sales the College has enabled the farmers to realize from one to four cents per pound more for their hogs than they had previously received, which is often more than enough to represent the difference between financial profit and financial loss in feeding operations. The swine specialist has selected 196 breeding animals for farmers, representing an investment of \$9,987.50.

Extensive feeding experiments with swine are now in progress at Moultrie. This investigational work was made possible through a coöperative agreement with Swift & Company. At the present time 150 hogs are on experimental feed. The value of peanut meal in combination with other feeds is being thoroughly tested. The sweet potato is also being used in experiments with a view of finding a carbohydrate suitable for fattening hogs that can be produced at less cost than corn. The velvet bean as a feed for hogs is also

being studied. The work has not progressed far enough to draw conclusions. It appears, however, that the possibility of substituting sweet potatoes for a part of the corn ration is quite likely. The velvet bean groups are making very unsatisfactory gains. Peanut meal is proving a quite satisfactory source of protein.

Swine demonstration work has been taken up in thirteen counties. The farmers are being shown how to lay out and equip a hog farm. Systematic grazing crops are planted, and with improved methods of feeding, care, and management, hogs of a better quality are being produced at a reduced cost.

The sheep industry is being encouraged as much as finances will permit. Much assistance has been rendered to farmers in the selection of breeding stock and instructions in the fundamental principles of caring for and feeding sheep.

A larger number of farmers coöperated in the feeding of steers during the last season than ever before. Experiments were continued during the season to show the value of sorghum pomace silage in cattle feeding. The results have been so gratifying that in many sections of the state farmers are filling their silos with what was previously a waste product. There were 1,023 steers included in the coöperative demonstrations supervised the past year.

A new feature of the beef cattle work during the year has been herd management demonstrations. Eleven such demonstrations have been arranged for, including 549 cattle owned by the farmers.

Production records are being kept on the herd owned by the Georgia State College of Agriculture, and this data is worth much to the students and farmers of the state.

The cheese factory work has enjoyed a most prosperous year. Three factories are now in successful operation, and the fourth one will be making cheese by July 1st. This new industry which the College has provided for the mountain districts of the state is giving the farmers of the section a new cash crop.

The advanced registry work has steadily gone forward during the last year. At the present time there are 112 cows being run on the yearly basis as compared with none a very few years ago. At the present time there are more high producing Jersey cattle as indicated by official records owned in Georgia than any other southern state.

It is interesting to note that there are more than 400 owners of pure bred and registered Jersey cattle in Georgia. It is felt that no greater service has been rendered to the live stock industry of the state than the organization the Georgia Jersey Cattle Club by the College. Definite plans have been made for shows, sales, and advancement of official testing on the part of the breeders.



## DIVISION OF FORESTRY

During the last year an endeavor has been made to build up the enrollment of the division and the indications are now that the entrance class of 1920 will number a dozen or more. There have been six men specializing in forestry; one junior and one freshman in the regular four-year course and four rehabilitation men in the vocational course. In the One-Year course there were six men who selected forestry as their option, as against three students in the four-year agricultural course.

The extension forester resigned early in the year to accept a more remunerative position with a contractor, the consequence being that many of the forestry projects have been dropped. A great deal of interest has been created in the creosoted post project and many agents have requested assistance in staging a demonstration. Two firms have undertaken the treatment of fence posts as a commercial proposition.

Three calls for assistance in the forming of a project study outline in woodland forestry have been received. Such an outline was published in the March number of the Vocational News Letter. As a result of the higher prices of wood, as well as the increased farm needs for posts and fuel, there is a growing interest on the part of students in the woodland. The time may not be far distant when teachers of vocational agriculture will be required to know woodland forestry as well as general agriculture.

On Arbor Day the school children of Athens were assembled in the College Auditorium where suitable exercises were held. At the conclusion of the entertainment each student was presented with a black walnut seedling for home planting. About 1,500 seedlings were given away.

During the Short Course a demonstration in the treatment of fence posts was conducted. Each step in the process, from the peeling of the posts to the removal of the treated posts from the tank, was actually carried out. Based upon their experiences and the prevailing prices of tar and labor the short course men came to the conclusion that the treated post would not cost more than 35 cents each and, under certain conditions, this figure might be halved. A number of these students requested assistance in starting the work on their home farms. The plant has been used also in treating posts for use on the farm and the experimental plats.

A campaign has been put on to acquaint the farmer with the true value of his woodland. The millmen of the state are securing much of the more valuable stumpage at the prevailing price of \$4.00 per thousand. Not infrequently the millman states that he would have been willing to have paid double what he did. The farmer should be warned to hold his timber at \$8.00 to \$15.00 per thousand.

## DIVISION OF HOME ECONOMICS

The closing of the second year in the existence of this division is marked by the graduation with the degree B.S.H.E. of twelve young women who return to home educational fields of endeavor. This is the first group of young women to receive the Baccalaureate degree from any state institution of Georgia. As students these young women have proven themselves representatives worthy of the privileges of higher education so long withheld by the hands of the State. Upon graduation these young women go into positions as supervisors and specialists in extension work, as teachers in vocational high schools, and other important positions. Requests for teachers of vocational home economics have been received from other states.

Registration of long course students majoring in home economics has numbered 35. Students pursuing college credit work in winter short courses and summer school, number 84. The latter represent teachers and extension workers now in service who are graduates of state normal schools and other junior colleges, and who cannot pursue study for a longer period.

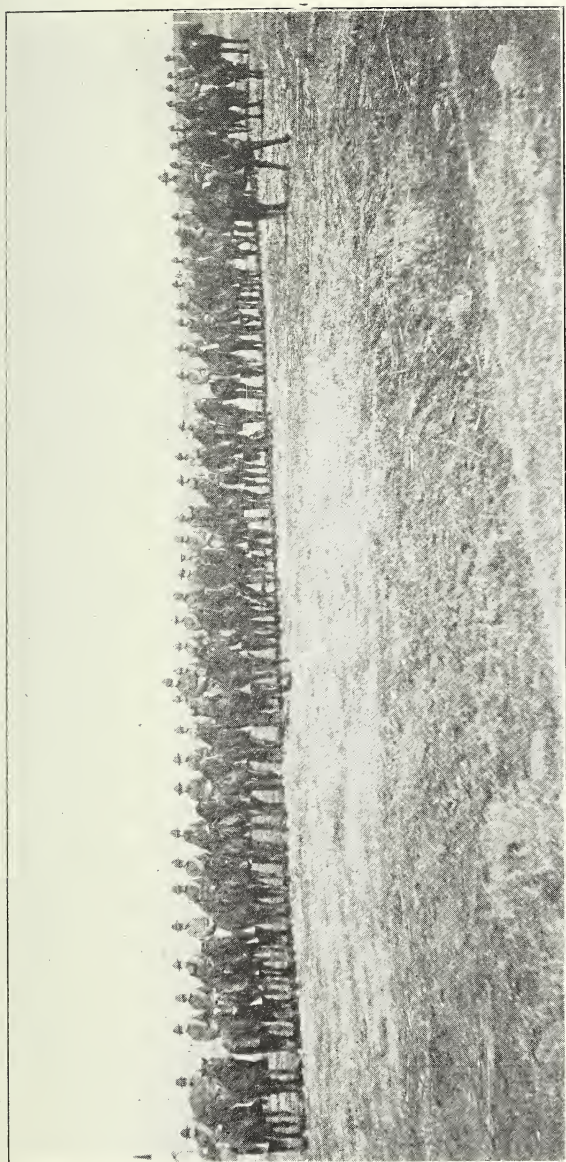
Courses in institutional economics were added at the beginning of the college year and have been the means of giving skill and application of scientific principles to living. The college cafeteria, a well equipped, modern plant, has been operated both for the benefit of the boarding students and the classes in institutional economics.

The courses offered give technical training for home-making, for teaching vocational home economics, for doing extension work, and for institutional management. They also give an all-round cultural education, making for appreciation of life and for training in leadership in home and civic affairs.

Inspection of work by representatives of federal and state boards for vocational education has elicited commendation for our standardization of courses and good work in teacher-training. Plans for further development of the vocational teacher training both in observation and practice teaching in a well-established high school department and in practice in home management have been made. For the latter a home management laboratory embracing a complete and attractive apartment, consisting of kitchen, pantry, dining room, living room, bed rooms and bath is ready. In this apartment groups of seniors will carry on work under the direction of teachers.

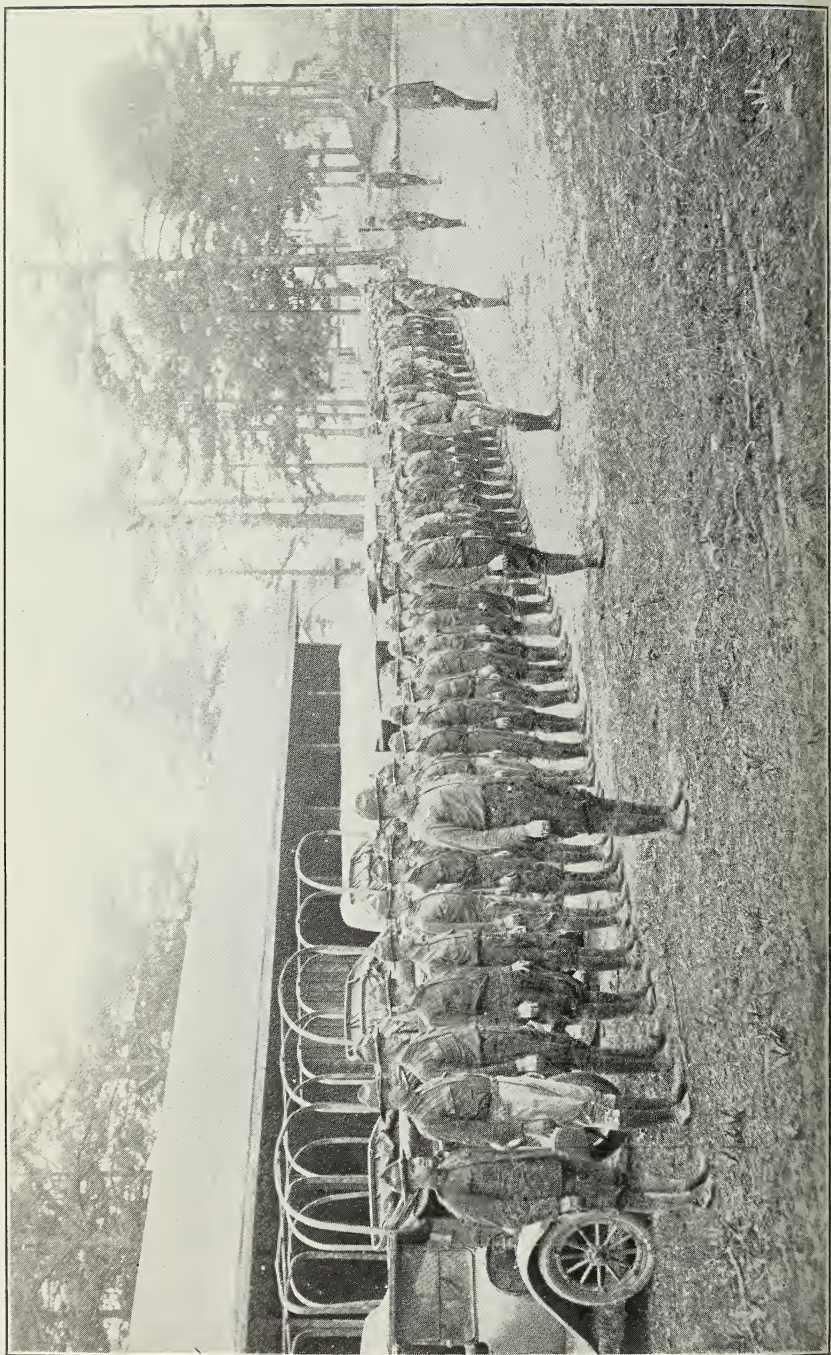
The most significant development for the division is the completion of the Woman's Building which will be dedicated June 11 and occupied both in laboratory and residence quarters during the Summer School beginning June 22.

The laboratory space for teaching textiles and clothing, cookery



Everybody wants to get into the Cavalry, so two troops of students will use the horses this fall. There are only eight troops of Cavalry so far authorized by the War Department to educational institutions.







and nutrition, laundering and home management here provided, is excellent. Accommodations for residence and social life for 66 students including spacious parlors, thoroughly modern bedrooms and baths, the gymnasium and swimming pool, are the best offered in any institution in the state. The appreciation of the women's organizations of Georgia for this building is indicated by the fact that they have already contributed \$2,375 toward furnishing rooms for students, and the balance needed seems assured.

The greatest need of the division is equipment for nutrition and laundry laboratories, for the home management apartment and for the gymnasium.

### **DIVISION OF HORTICULTURE**

The increase in the peach industry of the state is placing greater demands upon this division for information. With the completion and publication of the results of the apple fertilizing tests and tomato fertilizing tests this year, there have been established two fertilizing experiments on peaches, one in north Georgia and one in the peach section south of Macon. It is expected that after these tests have gone on for several years, they may be of value to the peach growers. Besides these new experiments, a new test has been started with apples and the satsuma orange. Fertilizer experiments have been continued. This gives the division at the present time eight fertilizer experiments on fruit and vegetables in different sections of the state.

Another outstanding feature of the work for 1920 has been the great increase in the extension landscape gardening. During the last year forty-seven plans have been drawn and completed for rural communities and homes, and one hundred six plans looked over and suggestions made for the betterment of school houses, court houses and country homes.

The fall Irish potato work has continued to increase as well as the home orchard club. At the present time the sweet potato clubs are being organized practically in every county where there is an agent, and it is expected that this fall there will be demonstrated a great interest in this crop. Sweet potato storage problems are becoming more vital. There are at this time in the state, houses with an aggregate capacity of 553,100 bushels located in 115 counties of the state.

It is pleasing to note that through the efforts of the division there have been 76 spray pumps introduced in the state this year. This means better gardens and better fruit, therefore, a step in the proper direction toward the lowering of the cost of living. The work with stored grain insects has continued to increase and improve. There is an added interest demonstrated yearly in the building of grain cribs which may be fumigated and the reducing

of the enormous amount of injury which is yearly experienced through the ravages of the grain weevils.

It is regrettable to note that the work with bees which created such an interest, was of necessity stopped on the first of January 1920 due to lack of funds. There is a large honey crop in Georgia which could well be saved and turned into a profitable crop if our farmers were sufficiently conversant with the handling of bees. It is to be hoped that this work may be started again.

The general work of the division has been hampered considerably this last season through an instability of the staff. It is to be hoped that conditions will be more normal the coming year so that the continuity of purpose and work can be maintained.

The young orchard which was planted last year came through the winter in good shape and is making a good growth this season. The next year's crop will be the last crop from the old, original trees, which were set in 1909, for as soon as the young orchard comes into bearing the old orchard will be removed.

The test which was started on pear blight was terminated by the removal of the pear trees. Of the ten or more varieties started in this test all of them have been killed by the blight. At this particular time experiments are being made with a new setting of pears which are reported to be blight resistant. It is to be hoped that some pears of commercial value may be found which will resist the blight, for this particular disease has about ruined the pear industry in Georgia.

The greenhouse has again been run to capacity and as the classes increase in size has practically become too small for student instruction. The rapid increases in the sizes of the classes and sections in this division have demonstrated that all of the laboratories are too small, and it is to be hoped that some arrangements can be made by which larger facilities may be obtained for the handling of classes and the storing of material. The rapid increase in the horticultural industries of Georgia renders the work of this division of vital interest to the state, and every effort should be made to place it in position to answer the calls that are being made upon it.

#### **DIVISION OF POULTRY HUSBANDRY**

Approximately 600 of the finest breeders representing seven different varieties, have been kept throughout the year. These birds have laid 84,843 eggs, weighing  $5\frac{1}{2}$  tons, or an average of 141 eggs per bird. Considering the fact that half of these birds were over a year old and several varieties such as the Brahmas and Bantoms are kept for instructional and experimental purposes,

this is a very good average. Many birds have laid more than 200 eggs in a year.

The production for the past four months has been as follows:

January,	7,192 eggs-----	39 per cent
February,	8,673 eggs-----	50 per cent
March,	11,109 eggs-----	60 per cent
April,	10,750 eggs-----	59 per cent
Average number of eggs laid per bird in 4 months-----		63
One pen Wyandottes averaged-----		82
One pullet laid (in 120 days)-----		104
Number of eggs laid by average Georgia hen in 12 months----		43

These records are interesting, first because they show that by proper breeding and care, chickens can be made to produce a large number of eggs, and second, because they show that it is possible to get heavy production in the winter when eggs sell at a premium.

Since January 1 the division has sold approximately 6,000 day-old chicks from the best breeders. Chicks are taken from the incubators and shipped by either parcel post or express. Because of the great demand, more than 50 chicks would not be sold to any one party. Chicks were shipped to all sections of the state. Present indications are that two large commercial hatcheries will be in operation before the next breeding season.

In addition to baby chicks, 5,200 hatching eggs and 150 breeding mates were sold. No chicks, hatching eggs, or breeders will be sold outside of Georgia in order that we may supply our own people first.

Experiments are now being carried on to determine the value of some of our home grown grain. The value of molasses as a constituent in poultry food is also being tried. Several forage and succulent crops are being experimented with under different conditions and at different seasons in order to make a more efficient poultry grazing chart.

Boys' and girls' poultry clubs and women's poultry clubs are doing very fine work throughout the state. Reports show a large number of new clubs and from 20 to 30 per cent increase in the number of members in the old clubs. These clubs are very instrumental in introducing pure bred poultry, and in teaching the proper care and breeding for heavy egg production.

Experiments have been conducted to test the value of fall hatching in Georgia. It was found that fall hatching and brooding can be done quite as easily and as efficiently as in the spring. Chicks hatched in the fall started laying when between five and six months of age. If these pullets lay through until winter, as is now ex-

pected, it will be possible by hatching both in the spring and fall to maintain an even production of eggs throughout the year.

## **DIVISION OF VETERINARY MEDICINE**

During the last year the usual lines of work of the division have been carried on. There was an increase in the number of students in the Veterinary Degree Course from eight to fifteen. This year is the first time the work of the junior year of this course was given. In the veterinary clinic four hundred and fifty-eight cases were handled during the year. A larger proportion than usual were of a surgical nature. Clinics for the instruction of students are conducted daily throughout the entire school year.

Further development of the Veterinary Degree Course is planned for the coming year. In order to carry our junior students through to graduation it becomes necessary to add the work of the senior year of the course to the present curriculum. This will necessitate the employment of one additional junior or associate professor who is eligible under the regulations of the United States Civil Service Commission and the American Veterinary Medical Association to teach a major subject in an approved college. The qualifications are: graduation from a Class "A" college, one year's additional training in some other approved institution, and three years experience in the practice of veterinary medicine or as a teacher.

The carrying on of the veterinary degree course is an important line of work for the state. Along with the establishment of live stock farms, dairies and live stock production generally throughout the cotton belt comes the demand for a competent veterinary service for the protection of the industry. As nearly all private veterinary colleges have closed it is now incumbent upon the various state institutions engaged in agricultural educational work to take upon themselves the burden of veterinary education. The Legislature should grant such support as will enable us to carry on this work creditably and well.

Veterinarians who come here from other sections of the country require some time to become familiar with conditions as they exist here and the methods of handling live stock that are in vogue here. The young man of this section who obtains an education in veterinary medicine should make the ideal veterinarian for this section. It is important that his opportunities here be equal to those elsewhere, if the course is to be a credit to the institution and to the state.

In the general extension work during the year 20 meetings were attended, two exhibits arranged and attended during the



fairs, 5,227 miles traveled and 36 days of service devoted to this work.

Educational work on hog cholera was conducted as special extension work by a graduate veterinarian who was assigned by the United States Bureau of Animal Industry to carry on this work in coöperation with the division. During the year the work accomplished was as follows: Work done in 42 counties; 76 meetings addressed; attendance 4,642; 106 farm visits; 2,040 farmers interviewed; 27 autopsies; 30 diagnoses of hog cholera; 2 fairs attended; 14,680 miles traveled on the work. Dr. E. S. Brashier resigned during the year and was replaced by the assignment of Dr. H. V. Persells.

The quantity of hog cholera serum produced during the year was 877,450 cc. The quantity sent out was 749,100 cc.

During the year the division has been able to influence a number of veterinarians to locate at points in the state where it was apparent that veterinary service was greatly in demand. These men have proved to be valuable additions to the communities in which they have located and have been of great service in controlling animal diseases.

As in the past, many farmers and stock owners have consulted with the various veterinarians on the staff relative to diseases of live stock. The fact that our men may be so consulted constitutes an important service for the live stock interests.

Attention was called in the report last year to the desirability of this division carrying on tests of proprietary preparations sold in the state and advertised as preventives and cures of animal diseases. A small annual appropriation for this purpose would enable us to do a great deal of work which would be of immense value to the farmers and live stock owners of the state. Many such preparations are without merit and authoritative tests should be conducted and results published accordingly.

#### COLLEGE OF SCIENCE IN ENGINEERING

The building of Georgia's great system of highways and many other kinds of construction work are calling for a larger and larger number of young men trained in engineering. The work of the College of Science and Engineering has been greatly hindered for years on account of lack of equipment and enlarged facilities for the training of its students. Please allow me to again call your attention to the urgent necessity for an engineering building to properly care for the students who are to be trained in this particular branch of work. An appropriation of at least \$50,000 is needed for this project, and between \$15,000 and \$25,000 for necessary equipment.

Moore College which houses the College of Science and Engineering is also used by the students of the Schools of Physics and Electrical Engineering, both of which departments should be immediately expanded to meet pressing needs. This is a further argument for the need of the proposed engineering building.

A special appropriation of \$5,000 for the road laboratory for equipment should be made available as early as possible for the immediate training of the young men who are to go out and help build the many miles of roadway which are now being authorized in all sections of the state. The appropriation of this sum for immediate use by the College will repay the state many times over in the better service which the men trained in engineering will be able to render. I ask you to give this matter your careful consideration.

### DIVISION OF PUBLICATIONS

Greater and more varied demands are being made upon the College every year for agricultural literature. Not only does the farmer, his wife and his children request information, but business men and commercial concerns are studying the practical and scientific side of farming as applied to their particular businesses.

A popular method for the distribution of agricultural information and the work which we are offering the farmers of the state through the extension division has been found in "The Georgia Extension News," a publication of eight pages measuring 11x15 inches. It seems to be more widely read than the ordinary bulletins and enjoys a wide distribution in other states.

Another new publication is "The Georgia Extension Special," which is an official news letter and goes only to the members of the extension force and the teaching staff. Through this medium the organization receives all plans for beginning new work and developing projects already begun. Each specialist gives the necessary instructions to agents in carrying on coöperative work, and by this means every one in the organization learns to know and appreciate the work of the other man.

A series of bulletins is now being prepared specifically for the agricultural clubs. Three of these have already come from the press and are entitled "Corn Club Lessons," "Pig Club Lessons," and "Calf Club Lessons." A "Poultry Club Guide" has also been distributed to poultry club members. These bulletins are serving a great need and will be enlarged and improved upon as recommendations from the field are sent in.

Plans are being made to improve the general make-up of the bulletins. In the past most of our literature has been written and published for filing and not to meet the needs and requirements of the reading public. Attractive covers and photographs carrying the information of the text will be more widely used.

The metal bulletin holder supplied to the banks has been called for widely and has served as one of the very best methods of distribution of bulletins. Of course, the great majority of publications have been delivered to the farmer personally by the county agent.

News stories to county weekly newspapers were for a time sent only intermittently on account of the great amount of publicity material put out under war conditions. Now that conditions have become more normal these stories of agricultural interest will be continued regularly to the weekly and daily press of the state. The newspapers, on account of shortage of labor and paper, have materially cut down on the amount of news space used.

Our own publications have lately come rather tardily from the press on account of the shortage of paper but relief is now in sight. For your information a complete list of publications giving the issue and the number of pages is submitted for your general information.

Bulletins			
Bulletin Title	No. Pages	Copies	Total Pages
Common Parasites of Swine-----	16	15,000	240,000
Tobacco Culture (reprint) -----	20	2,000	40,000
Planning Meals -----	12	15,000	180,000
Vegetable Gardening -----	22	15,000	480,000
Analyses of Turner County -----	30	1,000	30,000
Analyses of Soil of Crisp County -----	30	1,000	30,000
Filing of Bulletins -----	20	2,000	40,000
Extension Service Report, 1918-19----	61	1,000	61,000
Join the Cavalry -----	4	2,000	8,000
Prepare for Fairs -----	8	15,000	120,000
Wood Famine Imminent -----	4	2,000	8,000
Starve the Boll Weevil -----	4	10,000	40,000
Annual Report of District Ag. Schools--	32	1,000	32,000
Winter Short Courses for Women-----	4	1,000	4,000
Seed Treatment to Increase Yields----	20	3,000	60,000
Digestible Nutrients in Feed -----	4	5,000	20,000
Corn Club Lessons -----	20	10,000	200,000
Instructions in Farm Accounting -----	40	5,000	200,000
Poultry Club Guide -----	8	3,000	24,000
Poison Boll Weevils -----	12	15,000	180,000
Permanent Pastures for Georgia-----	36	10,000	360,000
Pecan Rosette -----	12	10,000	120,000
Tobacco Culture -----	36	7,000	252,000
Cotton Variety Tests -----	32	10,000	320,000
How to Cook Georgia Sweet Potatoes--	4	5,000	20,000
Boll Weevil Announcement -----	8	25,000	200,000
Cotton Grading School -----	4	3,000	12,000
Pig Club Lessons -----	32	10,000	320,000
Calf Club Lessons -----	16	2,500	40,000
Grow Sweet Potatoes -----	32	10,000	320,000
Terracing -----	4	10,000	40,000
Catalogues -----	144	5,000	120,000
Cotton Grading School Announcement--	8	1,000	8,000
President's Annual Report-----	100	1,000	100,000
Veterinary Announcement, 1919-----	8	1,000	8,000
Total -----	---	291,000	5,749,000
"Georgia Extension News" -----	8	57,000	456,000

### Posters

Title	Copies
Raise a Pig -----	1,000
Treat Fence Posts -----	2,000
Boll Weevil Meetings -----	5,200
Boys Join a Club -----	4,000
Fighting the Boll Weevil -----	3,000

### Circulars

Title	No. Pages	Copies
Farm Bureau and Extension Work -----	1	25,000
Hog Grazing Cards -----	1	10,000

## DIVISION OF ILLUSTRATION

During the last year the division of illustration has met increased demands for illustrative material. Pen drawings have been made for publication, maps and graphs colored, photographs tinted, signs and placards made for fair exhibits, posters painted to illustrate club work, and pictorial and statistical charts prepared to illustrate lecture material which our men and women agents use in the field.

The following subjects were illustrated by the pictorial and statistical charts: cotton, boll weevil, cotton oil content, permanent pastures, tobacco, wheat and oats, farm management, fertilizers, lime, drainage, soil survey, forestry, plant pathology, horticulture, interior decoration, food values, poultry husbandry, veterinary medicine, cheese factories, dairying, swine, and club work.

Exhibits of our pictorial work were shown at the Southeastern Fair, Atlanta; Georgia State Fair, Macon; Georgia-Carolina Fair, Augusta; Child Welfare Week, Savannah; First National Bank, Cartersville; First National Bank, Dalton; The Bank of Dalton, Dalton; Georgia National Bank, Athens; Teachers' Institute, Madison; Oxford Pageant, Covington; Food and Health Exposition, Savannah; and at many county fairs.

## LIBRARY

The library is steadily growing to meet the needs of the various departments; the collections of books pertaining to home economics and to vocational work have been increased as rapidly as possible. According to the accession book, the total number of volumes now in the library is 3,941. An important addition to the reference department made during the past year, was that of the Encyclopedia Americana, in 30 volumes.

In addition to the books regularly accessioned, the library has received from the American Library Association a loan collection of 100 books of fiction and travel, for the use of the rehabilitation students at the College.



The library has been very fortunate in obtaining a large number of missing bulletins, and has been able to complete a number of files, 115 volumes of bulletins and magazines having been bound during the year. Duplicate sets of all bulletins, in unbound form, are kept as complete as possible, for loan service to students and teachers. Substantial additions to the bulletin list have been made during the year: 2,101 bulletins were received from the United States Department of Agriculture, colleges, and experiment stations. These, together with the index cards which cover them, are filed in the library. Catalogs of the leading educational institutions of the country are also kept on file.

Bibliographical material upon the following subjects has been prepared during the year, and is now on file in the library: bacteriology in milk, carnation culture, club programs, cotton marketing, cow testing associations, cream separators, dynamite in agriculture, farm bureaus, feeding, immigration, kitchens, lettuce under glass, marketing milk, milk production costs, milk sanitation, milking machines, mosaic disease of sugar cane, pasteurization of milk, raising dairy calves, soft pork, tenant farming, turpentine industry, women in agriculture.

Subject matter upon the following debates has been sent to those requesting it: Resolved, "That under boll weevil conditions cotton should remain the principal cash crop; Resolved, "That the United States should permanently keep the Philippines;" Resolved, "That seed selection has greater effect on crop yield than fertility of soil;" Resolved, "That the rural labor problem can best be solved by the increased use of improved farm machinery."

In no preceding year was the library so thoroughly, so generally, and so continually used by the faculty and students of the College; the following statistics take no account of the use of the books within the library, as no record of this is kept: 2,829 books, 380 bulletins, and 211 magazines were loaned for home use. The library receives regularly about 150 newspapers of the state; the reading room is also provided with 145 other publications, agricultural, scientific, technical and popular. Some of these are obtained without cost, through the courtesy of the publishers. A collection of clippings upon the various activities of the College, and upon other valuable reference material, is kept on file.

The need for additional shelving space in the stack room has made it necessary to place shelving in the reading room, and the collection of herd books, numbering about 500, has been placed on these shelves. While this will greatly facilitate the use of these books by the students, as well as give temporary relief to the crowded shelving problem in the stack room, the need of more shelf room, with some additional space for periodical and reference purposes is still imperative.

## PRIZES, SCHOLARSHIPS AND GIFTS

As in former years our friends have remembered us very generously and have contributed a very considerable sum of money for use as prizes and scholarships and for the general maintenance of the various activities which the College is promoting. The Virginia-Carolina Chemical Company has renewed its gift of \$500.00 to be awarded to students in the junior, sophomore and freshmen classes showing the greatest all around proficiency. The Soil Improvement Committee of the Southern Fertilizer Association has offered a prize of \$100.00 to the senior making the best general record in his studies and who desires to pursue post-graduate work.

The Y. M. C. A. authorities have set aside \$3,600.00 to be awarded as scholarships to worthy ex-service men on the basis of \$150.00 to each one who wishes to enter the College next fall. Mr. H. G. Hastings has continued his scholarship of \$250.00 for another year. The Georgia Bankers' Association has contributed \$200.00 for scholarships.

Short course scholarships have been received through the agency of individuals, bankers, railroad organizations, women's clubs, county boards of education, fair associations and kindred organizations to the extent of \$6,363.92. These funds have been disbursed for the payment of the expenses of the boys and girls attending the annual short course. A trust fund of \$698.32 has been conveyed to your honorable body for the purpose of establishing a canning club scholarship fund on a revolving basis. In other words, girls nominated through the agency of the home economics division will be entitled to borrow a certain percentage of this fund at four per cent interest, repayment to be made on the same terms as pertain to the Brown Fund.

The revenues of the William Wilson Findley Foundation have been received and are being disbursed in accordance with the terms of the foundation. Two of our students are beneficiaries of the Celeste Parrish Memorial Scholarship Fund, this fund being controlled by the Student Aid Foundation. In addition, there is a credit of \$256.42 on the prizes and scholarships account, which makes the gross amount of money available for the purposes indicated, \$12,118.66.

The continuance of the pasture work to which reference was made last year has been assured by another gift of \$1,000.00 from Swift & Company. This firm is also maintaining a field agent for the College at their Moultrie plant at an expense of \$1,500 a year. He has charge of the hog feeding demonstrations which the College has organized, the expenses of maintaining which Swift & Company is defraying. The object of this test is to determine methods of overcoming soft pork.

Various railroads and other organizations contributed \$2,014.20 towards defraying the expenses of the land-clearing special train operated through south Georgia last summer and fall.

The women's clubs in the following towns and counties have each contributed \$120.00 or more towards furnishing a room in the new Woman's Building, the total amount received from this source being \$2,330.97: Savannah, Augusta, Rome, Commerce, Lavonia, Montezuma, Athens, Columbus, Millen, Terrell County, and the Third District; also the U. D. C.'s of Moultrie, Hawkinsville, Lafayette, Fort Valley and Georgia Division, the Twentieth Century Club of Tifton, the Athens Business Women's League, the Whitfield County Fair Association, the Clarke County Farm Bureau, and the home demonstration agents of the Georgia State College of Agriculture have also furnished rooms.

The State Fair and the Southeastern Fair Associations have endowed our work to the extent of \$1,145.00. The funds were used to help defray the cost of installing the exhibits made at the two fairs.

In addition, medals and trophies were awarded to students in the stock judging teams, a ton of sulphate of ammonia donated to the division of agronomy, one hundred pounds of magnesium arsenate to the division of horticulture, a pen of fine Cornish games to the poultry division, and many machines loaned to the division of agricultural engineering.

You will no doubt be gratified to know that the equivalent of \$21,000.00 has been contributed for the purposes indicated above. This is a very gratifying evidence of the growing interest which is being manifested in our work and of the appreciation and esteem in which it is held by the public. It is a privilege to be permitted to express to the many friends who have so generously supported our work during the last year our deep sense of gratitude and appreciation for the splendid service they have rendered the various welfare activities which the College has in charge. Without their aid and coöperation along the lines indicated many phases of special endeavor work could not have been undertaken, or if already in existence would have had to be abandoned.

### THE CAMPUS

The most noteworthy development of the campus during the last year has been the erection of the Woman's Building. Plans have been made for an exceptionally attractive planting between this building and the main driveway through the campus. Upon the completion of the planting, the College of Agriculture will have one of the finest open air theaters in the East.

The general plantings have been added to during the past season. The plants are maturing and becoming more beautiful yearly. The planting around the Animal Husbandry Building had been planned, but due to the fact that it has now been turned over to the cavalry, it was deemed advisable not to set trees and shrubs around the new building. With the removal of the Cavalry Unit to permanent quarters and the completion of the Animal Husbandry Building, plantings will be made in this section of the campus.

The flower garden between the main building and Veterinary Building continues to mature and yield a great number of flowers as the seasons go by. Progress is still being made in the development of park effects in the woodland in front of the main building.

One of the most hoped for improvements to be made on the campus will be the removal of the power house, for as at present located it obstructs the view from the rear of the main building down the main road through the campus, and as it must be continually surrounded by coal it is most unsightly and unattractive. With the removal of this power house to the ravine below the railroad, the campus will be opened up in such a way that the buildings along the main driveway will be improved in appearance and accessibility.

A great deal of trouble has been experienced in obtaining sufficient labor to keep the grounds in the normal condition. The College has taken a pardonable pride in the well kept condition of its campus and it is hoped that normal conditions will soon arrive so that it may continue to be kept in its regular condition of cleanliness and neatness.

## ROADS AND DRIVES

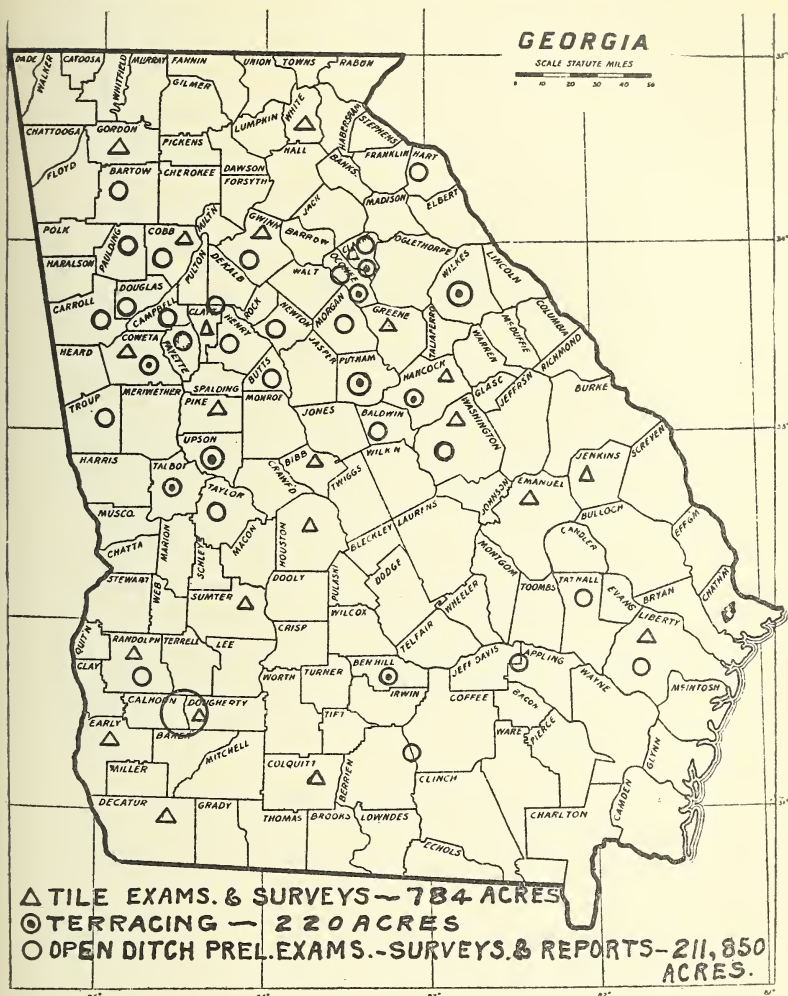
Considerable trouble has been experienced in keeping the roads and drives up to their former state of perfection. This has been due to a shortage of labor and to the fact that continued rains have added to the expense of their upkeep.

The bridge that had been started over the creek below the horticultural grounds was unfortunately washed away during a very severe flood last winter. This will hold back for a while the completion of the river drive which it was hoped that by this time would have connected the College system with the Whitehall road. The people of the immediate neighborhood continue more than ever to use the property of the College for pleasure and recreation. The plants and roads about the driveways constantly attract the attention of visitors, and the frequent requests for information concerning them demonstrate the fact that the general appearance and beauty of the College is making itself felt in the neighborhood.

Plans have already been made for the development of an elliptical drive to connect the Woman's Building with the main drive from



## EXTENSION WORK IN DRAINAGE AND TERRACING



the south entrance of the Administration Building. This new drive will afford a boundary for a sunken garden which it is hoped in time to make one of the most conspicuous and attractive sections of the campus.

Every effort should be put forward to complete the driveways through the farm and campus, for it is unquestionably true that upon the completion of this system of roads the institution will be brought into much closer touch with hundreds of persons who would never visit it were it not for the fact that its well kept and attractive roads demand their attention.

## COLLEGE FARM

It should be distinctly understood that the College farm is not operated for the purpose of making money. On the other hand, the only reason for its existence is for education from the standpoint of demonstrations and experimentation. It is both a class room and a laboratory. In order to have specimens of the commoner breeds of live stock, the College is maintaining five herds of breeding cattle and three herds of hogs.

The sheep industry is attracting such proportions in the state that it is felt our students should have the opportunity of becoming familiar with the commoner breeds of sheep so that as soon as funds are available flocks of some three or four of the commoner breeds of sheep should be added to the live stock on the College farm.

From a commercial standpoint, it would be much more advantageous and less expensive to stock the entire farm with animals of one breed rather than a variety. In spite of the fact that the farm is run for educational purposes, careful business methods have been employed, and it is gratifying to note that each year a small profit has been shown on the farming operations.

As time goes on the work of the College farm proves a more and more valuable adjunct to the teaching of agriculture in all of its branches, to the regular agricultural students, to short course students, and to the visitors who are coming to the College in ever-increasing numbers. Diversification, crop rotation, feeding of live stock and returning the manure to the soil have all added each year to bring the farm to a higher state of production and to increase the revenue.

The receipts for the last fiscal year are \$29,265.23, or an increase of approximately \$8,000.00 over last year. The net profit on the College farm was \$3,201.97. Considering the unprecedented cost of labor, feed and material this is a most gratifying financial showing.

The total receipts from the dairy herd for 1919-20 amounted to \$18,651.45. This is an increase in the dairy receipts of approximately \$5,000 over the previous year. A part of the added returns is due to the slight increase in the selling price of dairy products, and an appreciable part of the increase is due to the superior productive capacity of the cows bred by the College. The receipts from the coöperative creamery amounted to \$3,542.70, making a grand total of \$32,807.93 received by the Animal Husbandry Division and turned over to the treasurer for the fiscal year 1919-1920.

The following table showing the receipts from the College farm for a period of thirteen years indicates wonderful progress in the

financial returns to be anticipated from stock farming with a very small proportion of the land devoted to cotton production. The table shows that the receipts for the fiscal year ending June 1, 1908, amounted to \$1,799.37, and that the business has steadily grown in the thirteen years until the total receipts are now approximately fifteen times what they were thirteen years ago, but little opportunity was afforded to more than lay the foundation of live stock development. That year one-fourth of the total income was derived from the sale of cotton. As a rule from fifteen to twenty acres is all of the cotton grown on the College farm. With approximately this acreage in cotton thirteen years ago the receipts from this source amounted to less than \$500.00. During the present year the sale of cotton and cottonseed amounted to \$4,145.11. Approximately two-thirds of the total receipts were derived from the sale of dairy products. The records show that \$5,838.80 worth of live stock was sold during the last year.

Since the farming operations have proven a profitable investment aside from their inestimable value in the teaching of agriculture, it is felt that greater expenditures should be made in the future for providing more typical representatives of the commoner breeds of live stock grown in Georgia. Furthermore, by improving the quality of the herds maintained by the College, much better specimens of live stock can be sold at reasonable prices for improving the stock of the various communities throughout the state.

As in previous years most of the farming land has been devoted to the production of forage and feed crops for the purpose of maintaining the animals.

The acreage devoted to the various crops for 1920 is as follows:

#### CROPS ON COLLEGE FARM, 1920

Corn -----	58 acres
Silage -----	40 acres
Oats -----	36 acres
Winter hay -----	20 acres
Cotton -----	21 acres
Rye -----	16 acres
Alfalfa -----	33 acres
Tame grasses -----	5 acres
Grazing crops for hogs -----	5 acres
Total -----	234 acres

Approximately 70 acres of peas will be planted after the various winter cover crops have been harvested. This will make a total of 304 acres cultivated during the year.

#### LIVE STOCK

The sale of dairy products and the sale of live stock as well as the inventoried value of the animals now owned by the College

shows improvement year by year. There are 155 animals owned on the College farm, 143 of which are pure bred and registered. This is an increase of 7 pure bred animals over the number owned a year ago, and a slight decrease in the number of grades maintained.

Attention is called to the fact that thirteen years ago the inventoried value of all live stock on the farm amounted to \$1,917.00 and that at the present time their value is \$26,155.00. The accompanying tabulation shows that this vast holding of live stock has been acquired at an actual profit since the annual expenditures for the purchase of live stock has been much less than the sales, and that the sales and enhancement in value of the herds amounts to approximately twelve times the amount spent annually for acquiring new animals.

At the present time the Holstein herd consists of 38 registered animals and 5 grades. All of them, with the exception of the herd bull, were bred on the College farm. The entire herd is descended from one cow. The Jersey herd consists of 32 registered animals. With the exception of the herd bull, all of them were bred on the College farm. The Guernsey herd consists of 7 registered animals, the Hereford herd of 10 registered animals, and the Shorthorn herd of 13 registered animals. Eighteen horses and mules are owned, including five registered Percherons and two high grade brood mares. The hog herd consists of 18 Poland-Chinas, 12 Hampshires, 1 Berkshire, and 6 grade hogs, which are maintained for stock judging purposes.

#### LIVE STOCK STATEMENT

Value of live stock on College farm September 1, 1907_	\$ 1,917.00
Expenditure for purchase of live stock from September 1, 1907 to June 1, 1920_	15,507.27
Value of live stock June 1, 1920_	\$26,155.00
Sale of live stock from September 1, 1907 to June 1, 1920_	31,276.99
Net increased value plus sales above expenditures for purchasing live stock_	40,007.72
	<hr/>
	\$57,431.99    \$57,431.99

#### Sales Exceed Purchases

Average amount expended yearly for purchase of live stock_	\$ 1,192.87
Average annual sales_	2,405.92
Average net yearly increase in inventoried value of live stock_	1,864.46

#### VALUE OF LIVE STOCK

The accompanying table shows a steady increase in the value of



the live stock. Attention is directed to the fact that a beginning was made thirteen years ago with a total of 42 animals worth less than \$2,000.00. During the thirteen years the value of live stock has increased from \$1,917.00 to \$26,155.00, or an increase of \$24,238.00, while the number of animals has increased from 42 head to 155 head.

#### VALUE OF LIVE STOCK

Fiscal Year	Value	Number	Per cent Increase in value
September 1, 1907 -----	\$ 1,917.00	42	-----
1908-1909 -----	5,082.50	71	165.1
1909-1910 -----	6,937.50	132	36.5
1910-1911 -----	10,042.00	213	44.7
1911-1912 -----	10,265.00	159	2.2
1912-1913 -----	12,005.00	167	16.9
1913-1914 -----	13,580.00	170	13.1
1914-1915 -----	14,532.00	163	7.0
1915-1916 -----	17,310.00	145	19.1
1916-1917 -----	19,870.00	146	14.8
1917-1918 -----	21,554.00	181	8.4
1918-1919 -----	22,467.50	192	4.23
1919-1920 -----	26,155.00	155	16.4
Total increase for 13 years--	\$24,238.00	113	1,226.00

#### SALE OF LIVE STOCK

It is gratifying to note that each year the revenues derived from the sale of live stock show a material increase which is an indication of the appreciation of the College animals by breeders throughout the state. During the last year a total of 122 animals were sold, 72 of which were pure bred and registered. For the previous year only 57 pure bred animals were sent out from the College farm. A vast majority of the animals sold have been pure bred bulls which are effecting improvement in the herds into which they are sold. The total sales of live stock amounted to \$5,838.80, as compared with \$4,694.59 for the previous year, which is an increase of \$1,144.21 over the total sales for the previous year.

#### LIVE STOCK SOLD

Kind of Animals	No.	Pure Breds	Grades	Price * per Head	Total Value
Dairy cattle -----	24	15	9	58.81	\$1,415.90
Beef cattle -----	15	15	--	124.55	1,868.35
Hogs -----	78	42	36	21.05	1,642.05
Horses and mules--	51	--	5	167.50	837.50
Service fees -----	--	--	--	-----	75.00
	122	72	50	-----	\$5,838.80

## RECEIPTS FROM DAIRY HERD

The financial results from operating the dairy herd have proven an inspiration to students of the College and stockmen throughout the state. The following table shows that thirteen years ago the total receipts from the dairy herd were \$1,124.44. The close of the present fiscal year shows a total income of \$18,651.45. The data revealed in the last column of the table is most interesting.

For the first year the gross returns per cow were \$86.49. This has steadily increased until at the present time the receipts per cow are \$444.08. The herd has been brought to this high standard of production by keeping records on the foundation cows, breeding them to high class bulls, and retaining the heifer calves in the herd. These fundamental principles should be practiced by every dairyman in the state of Georgia.

### DAIRY RECEIPTS

Fiscal Year	Total Receipts	No. Cows	Return per Cow
June 1, 1907-1908 -----	\$ 1,124.44	13	\$ 86.49
June 1, 1908-1909 -----	3,891.40	30	129.71
June 1, 1909-1910 -----	4,331.02	30	144.37
June 1, 1910-1911 -----	4,346.87	30	144.89
June 1, 1911-1912 -----	5,099.44	32	159.35
June 1, 1912-1913 -----	5,675.46	32	177.36
June 1, 1913-1914 -----	6,036.57	34	177.53
June 1, 1914-1915 -----	6,562.60	34	193.01
June 1, 1915-1916 -----	6,700.41	35	191.44
June 1, 1916-1917 -----	7,392.04	36	205.33
June 1, 1917-1918 -----	10,750.34	40	271.26
June 1, 1918-1919 -----	13,686.09	40	342.15
June 1, 1919-1920 -----	18,651.45	42	444.08
Total increase 13 years -----	\$17,527.01	29	\$357.58

The coöperative creamery operated by the College has had a successful year. During the twelve months 5,432 pounds of butterfat were purchased from the patrons for which they received \$3,542.70. This was an average price of 65.2 cents per pound for butterfat, which is probably more than double the price the farmers would have received had they manufactured the butterfat into country butter. In addition to realizing for the farmers almost double the amount they would receive for their butterfat, the creamery has proven a most valuable adjunct to the Animal Husbandry Division in teaching fundamental principles of dairying to the Animal Husbandry students and the students in home economics.

### EXPERIMENTAL PLATS

The grass work here has been somewhat large during the last

year, and a few new plants introduced. The most promising of these are an introduced grass and the mammoth clover. The grass referred to is one that is ordinarily supposed to be adapted to cool climates, and of three grasses of the same group that were tested, only one proved of any value at all. That stood last summer and made an excellent growth. It seemed to stand the dry weather the latter part of the year, and stayed green during the winter. On the 10th of April this grass was 18 inches high. Its palatability has been tested by grazing a calf on a small portion of it, and it seems to be readily eaten. When eaten down, it recovered and made a very rapid growth. There is no common name for this grass. The botanical name is *Agropyron elongatum*. It seems to have good seeding habits and the seed should not be an item of any great expense.

The mammoth, red and alsike clovers were seeded in adjacent plats, and while the mammoth has made an excellent growth from both the fall and spring seeding, it stood through last summer in good shape, the common red clover has disappeared entirely, although there was a fair stand to start with. The alsike clover has also made a good growth but not so much as the mammoth.

Twenty different species of bur clover were tested during the present year. Seven of these killed out entirely, and only five showed any considerable promise. Arrangements are being made to have these five tested on a larger scale for next year. It is expected that they will be tested not only for their ability to stand the winter and the amount of growth they make, but how they will stand grazing.

A number of sweet clovers were also tried. Of these there is only one of outstanding promise. This made a growth of six to ten inches during the early fall, and stood the cool weather of the winter in excellent condition. It seeds freely, and while it will not make as much growth as the ordinary white sweet clover, its growth during the winter makes it of considerable promise. Three yellow sweet clovers are being tested that may be of considerable value for the coast region and possibly sections of the southern part of the state.

A number of vetches not heretofore tried have been grown during the last year. Of these *Vicia panonica* seems to be the most promising. Unless some of the other vetches tested should prove to have better seeding habits than the hairy or Oregon, it would seem that these two would not be displaced in our agriculture.

The alfalfa seed from Kansas and Nebraska continue to give the best results. This, if anything, is more marked in the more recent seedings than it was in the earlier ones. The work up to date has unquestionably established a most practical region for securing

seed for Georgia conditions. If the best type adapted to Georgia could be grown in that region, it would give a source of seed that would be of immense value in growing alfalfa in the state.

A special effort has been made during the past year to increase the special selections of Fulcaster and Georgia red wheat, and it is expected that a considerable amount of this will be available for distribution during the present season.

## EXECUTIVE OFFICE

For some years an endeavor has been made to maintain this institution on a three-phase basis: in other words, to emphasize instruction, research and extension teaching as uniformly as possible. The fruition of the Smith-Lever Act has enabled us to emphasize extension teaching out of proportion to either of the other phases of the work which properly constitute the domain of an agricultural college. Our divisions have reached the limit of their growth under our present income. Research problems thrust upon us from every side, which we would be pleased to attack and solve, cannot be undertaken. Thus, two vital parts of our work are suffering from lack of adequate support. This in turn militates against the growth and advancement of the divisions concerned.

The only hope of reward which the college professor has is along lines of service and discovery. If he is to be a successful teacher he must have the equipment and facilities to accomplish the end he is striving to attain. If he is to be an enthusiastic teacher, a veritable well of information and a fountain of knowledge, he must be encouraged to do research work. The thirst for new and more definite data, the desire to obtain new truths, constitute the greatest incentive to the man who proposes to devote his life to humanistic purposes. It is unfair not to accord him the opportunities to which he is entitled under the circumstances. It is unwise to curtail his effort. It is perverse and foolish to drown his enthusiasm. Such a policy is ruinous because it reacts so strongly against his value as a teacher and as a research worker.

The student, the state, civilization, progress and the world are held back and suffer through the exercise of a niggardly policy toward enterprises of this character. In view of the existing situation, I think it is clearly my duty to emphasize these facts as strongly as possible and to urge upon you the necessity of securing such an endowment for instruction and research as will enable us to better serve and advance the interests of the students entrusted to our care and the state of Georgia as a whole.

There are those who seem to think that new information is not essential, that there is vastly more known than is now put into





insects and the more destructive plant and animal diseases. The farmer is now affected materially by the supply of gasoline. The early exhaustion of our wood supply is a matter of serious concern to our agriculture. The improvement of the health of our people through the elimination of flies and malaria and through more adequate nutrition are problems of nation-wide proportions. Are we to sit idly by and reap the consequences of our own indifference and neglect of research and of education based on the broadest and most fundamental conception of our need or shall we arise in our might and through the services of our educated leaders clear all obstructions from the pathway to progress!

### PLAN FOR RESEARCH WORK

We must formulate a definite plan of procedure and that very soon. There is an old saying that "time and tide wait for no man." Let us be up and doing. We must make hay while the sun shines. Research under the most favorable circumstances is a tedious, disappointing type of work. Nature conceals her secrets very effectively. It takes much concentration, much self-sacrifice, an immense amount of application, a determination of spirit that declines to be baffled to add something to the sum total of worthwhile human knowledge. Thus, we must expect to frequently wait a long time for results, and so it is important that the foundations for research and for instruction along agricultural lines as a consequence thereof be laid out on broad and deep lines in Georgia, and the work of building a structure thereon, worthy of our day and generation, commenced immediately.

My entire energy and attention has been centered on the work of the college during the year now closing. I have endeavored to keep in touch as closely as possible with the work of every division and to advance the welfare of our staff and student body as effectively as possible under existing conditions. The year has been one full of trying circumstances because of the many changes which have occurred in our staff with a considerable tendency to slow up or disrupt various lines of work. We have overcome these as best we might and without suffering serious losses.

This office has a large family with which to deal, since there are more than 300 members on the staff. The majority of these people are working in a field where they necessarily have to meet and deal with the most varied kinds of problems. Our institution is almost daily in contact through its workers with hundreds of individuals, and we have to take into consideration their inclinations, tastes and wishes.

Under the circumstances, there are daily many problems which require careful consideration and attention in order that the best interests of our workers and the people of the communities they

serve may be protected and advanced and a helpful spirit and relationship maintained which reach from the center at Athens down almost to the smallest community in the state. It requires a great deal of energy and consideration to handle these problems satisfactorily. A large measure of the success attained is due to the splendid spirit which has pervaded our workers, the support accorded this office by the staff and the evidences of the fairness and consideration extended the college by thousands of individuals with whom we come in contact each year as a result of the wide-spread nature and character of our work.

### WOMAN'S BUILDING

The erection of the new Woman's Building entailed an unusual amount of responsibility on this office, and I trust we may never have to build another structure under such trying and difficult circumstances. On many occasions it was impossible to secure the materials needed, while there has been a steady rise in prices and a frequent demand for increased wages on the part of the laborers employed that has often been most perplexing to handle satisfactorily.

By your direction, plans have been made for the dedication of the building with appropriate ceremonies Friday evening, June 11 at 6 p. m. The principal address will be delivered by Mrs. J. E. Hayes, President of the Federation of Women's Clubs and through whose interest the first donation of \$120.00 to furnish a room was secured.

The completion of the Woman's Building without an appropriation from the state must be a source of great satisfaction to you as Trustees. The actual outlay in association therewith will be approximately \$100,000 though it would cost a good deal more than that to replace it at present prices for labor and materials. It is indeed a beautiful structure, substantially built and admirably arranged throughout.

It is not in any sense a dormitory, but a home for women. Adequate provision has been made therein for developing the young women of the state physically, socially, culturally and the intellectually. In addition, they will be trained as expert technicians in foods, home management, nursing, sanitation, textiles, clothing and in all home making arts and industries. This building is, therefore, essentially different in design from that of an ordinary dormitory, and, for this reason, it has been called at your suggestion the Woman's Building. It will stand as a monument for all time to your foresight and energy.

It fittingly commemorates the establishment of co-education in Georgia. It provides the opportunities and facilities which will enable the women of the state to receive the same educational benefits and opportunities so long accorded to its men. It is a source

of pleasure to have had a part in consummating a movement of such far-reaching importance and to have been an instrument in helping to provide a domicile worthy of such an undertaking.

There has been no material change in the administrative staff during the year. It now numbers 92. The staff has not grown for financial reasons, though the increase in our student body justifies and necessitates the employment of more teachers as the sectioning of the classes has now become imperative.

### **EXCELLENT WORK BY STAFF**

In this connection I wish to express to you my appreciation of the excellent work done by the staff throughout the year. Many of them have had to labor under peculiar and trying conditions. They have acquitted themselves in an acceptable manner and have shown a fine spirit of devotion to the cause which they are serving. It is impossible for me to mention individuals without discrimination where so many are concerned. Therefore, I think it is undesirable to follow such a course, so I am adhering to the plan previously adopted of commending the staff as a whole and recommending them to your favorable consideration.

Certain changes have been made in the Smith-Lever projects. They now number sixteen as compared with nineteen last year. The reduction was brought about entirely by the withdrawal of the war emergency fund previously made available to the several states through the United States Department of Agriculture. Our work has not been seriously impaired by these changes though we have abandoned certain lines of effort altogether.

For example, we have had to cut down the number of specialists employed in our animal industry projects. The work with bees, forestry, plant pathology and cottage cheese making also had to be eliminated. This, of course, was unfortunate as much valuable work was being done along the lines indicated; but since the situation which resulted in making these changes necessary was quite beyond our control, we met it in the only way possible under the circumstances. I am glad to say the most fundamental projects are still in full force and effect.

### **TREASURER'S REPORT**

The report of our Treasurer, Mr. T. W. Reed, who is a bonded officer, presents in detail a statement of all the moneys received and disbursed by this institution. It is needless to say that the funds have been distributed under your direction and in accordance with the law governing their appropriation and expenditure. Any changes or modifications which it has been necessary to make in the



program laid down by you at your annual meeting have been considered and approved by the executive committee.

No funds of the college are received or disbursed through this office, all payments being made by voucher checks issued by the Treasurer. The attention of all who may be interested is directed to the statement known as "Addendum A" a copy of which has been attached to this report. It is made up in accordance with the rules and regulations prescribed by you and the States Relations office under the joint agency of which we carry forward all projects conducted under the terms and provisions of the Smith-Lever Act. The Treasurer has reported the manner of the distribution of the maintenance funds separately from that of the fund assigned us by the state for general extension work.

Our state extension funds are spent so as to secure the largest possible off-set from federal sources. As you doubtless know the Secretary of Agriculture is authorized by Congress to expend considerable sums of money appropriated to the various bureaus of the United States Department of Agriculture in coöperation with the several states. Under this arrangement up to the present time we have been able to secure an off-set from federal funds of approximately two dollars for one derived from state sources. Our extension work as distinguished from the Smith-Lever work is, therefore, closely associated with that of the United States Department of Agriculture, and is conducted in accordance with the memorandum of agreement signed by your direction with the Secretary of Agriculture June 15, 1914.

In addition to the accounting made to your body and to the general Board of Trustees by Mr. T. W. Reed, who is both the Treasurer of the College and the University of Georgia, there is a special pamphlet issued each year and distributed for the information of the Legislature by the Hon. Henry D. McDaniel, Chairman of the general Board of Trustees of the University of Georgia. This pamphlet gives in such detail as the laws of the state require any additional information relative to our finances which may not have been included in this report.

A considerable part of the energy and time of this office is taken up in formulating plans for coordinating and advancing the work of the institution as a whole. A proper relationship must be maintained between the several divisions. The adjustment of differences between workers is not always easy to maintain.

Many of the charts and much of the data used by our extension workers in the various departments is formulated and prepared in my office. I consider that in this way I can most effectively serve the needs of the student body, our staff and the public generally. During the year a new series of charts and the data needed to make



schools and the means by which this may be attained. These are but examples of the effort made to serve special interests as advantageously as possible. A considerable amount of travel has also been done both within and without the state.

The following addresses have been delivered during the year: Farm Bureau Federation Conference in Atlanta, Boys' Short Course at the Southeastern Fair School in Atlanta, Fertilizer Salesmen in Atlanta and in Athens, the Farm Bureau Federation Conference in Macon, the Association of the Agricultural Colleges and Experiment Stations in Chicago, the Georgia Educational Association in Macon, the people of Madison and Morgan County, to farmers on controlling the boll weevil at a number of places, to the Boys' High School in Atlanta, commencement address at Cartersville High School, the Georgia Bankers' Association in Athens, the Georgia Association at Tifton and Macon, the Southwest Georgia Association at Moultrie and to the High School at that place, the Dublin Chamber of Commerce, the District A. & M. Schools at Tifton and Monroe, the High School at Tifton, and to some thirty other groups of visitors and representatives of various organizations which visited the college during the year.

## INVENTORY

Following your advice an inventory has been prepared in which an attempt has been made to state the value of the property in your charge on the basis of its replacement value. That the statement which follows is still very conservative is witnessed by the fact that a number of real estate agents in Athens have put a price of \$1,000.00 to \$1,200.00 per acre on all the land under your charge. In making up the estimate we have put the land in on the basis of \$800.00 per acre. Competent engineers say it would now take \$300,000.00 to replace the main building. We have entered it in the inventory statement at \$250,000.00. The same relative allowance has been made in determining the values of all the other property, with the exception of the power plant which has not been materially increased due to the fact that some of the equipment therein has now been used for several years.

The agricultural engineering building is valued at \$75,000.00. It is believed that it would take \$100,000.00 to replace this structure. The new woman's building has been entered in the inventory at a figure approximately its actual cost although it would cost a good deal more to build it now, as much of the material which was fortunately purchased before the marked rise in prices of the last twelve months would cost two, three and even four times as much to buy as was paid for it. The new transport shed and cavalry barn have been put in at their actual cost.

## Inventory

Land, 830 acres -----	\$ 664,000.00
Main Building -----	250,000.00
Power House, including heating plant, light, water, plumbing, sewerage, gas and sidewalks -----	38,250.00
Division of Agronomy, including barns, house and demonstration field equipment -----	19,689.00
Photographic room equipment -----	300.00
Division of Forestry -----	5,397.00
Division of Horticulture, including barns, tools and other equipment -----	23,196.00
Extension equipment and exhibit cases -----	14,511.00
Division of Agricultural Chemistry, including soil laboratory -----	7,012.00
Division of Agricultural Engineering, including laboratory -----	83,828.00
Division of Veterinary Medicine, including hospital and serum plant -----	27,933.00
Division of Poultry Husbandry, including buildings --	15,415.00
Division of Home Economics -----	5,400.00
Division of Agricultural Education, including build- ing and equipment -----	13,705.00
Library -----	8,164.00
Division of Animal Husbandry, including creamery --	5,460.00
Live stock on farm -----	26,155.00
Farm buildings, barns and tenant houses -----	54,564.00
Tools and implements -----	5,668.00
Womans' Building -----	100,000.00
Cavalry barn and transport shed -----	10,000.00
	<hr/>
	\$1,378,647.00

The inventory on the above basis now totals \$1,387,647.00. It would be very conservative to say that the value of the grounds, buildings and equipment under your charge are now worth \$1,500,000.00. The property is in fairly good repair. About \$10,000.00 should now be expended for fixing the roofs of some of the buildings and painting the exteriors. A good many of the buildings have now been standing for eight to ten years and they are reaching a condition which makes their immediate repair essential. I believe if this matter were presented properly to the legislature this summer that an appropriation of the character indicated would be made for this purpose.

As in previous years, considerable additions have been made to the apparatus and equipment assigned to the several divisions. The property in charge of the Division of Agronomy is now worth \$19,689.00; Division of Forestry, \$5,397.00; Division of Horticulture, \$23,196.00; Division of Agricultural Chemistry, \$7,012.00; Division of Veterinary Medicine, \$27,933.00; Division of Poultry Husbandry, \$15,415.00; Division of Animal Husbandry, \$5,460.00; Division of Agricultural Education, \$13,705.00; and the Division of Home Economics, \$5,400.00. The buildings, barns and tenant houses on the farm are worth \$54,564.00; and the live stock, \$26,155.00.

Our roads and fences have been kept in fairly good condition



during the last twelve months. Some improvements have been made to the grounds in the way of necessary grading. A large amount has been accomplished through a coöperative agreement between the trustees of the University of Georgia and the Commissioners of Roads and Revenues of Clarke County. The grounds around the Woman's Building have been graded and the site for the cavalry barn has been prepared.

### NEEDS OF THE COLLEGE

The need of enlarged facilities for the College was never more urgent. We are fast getting into the condition of the "old woman who lived in the shoe." During the thirteen years since the College was reorganized, it has received \$110,000 for buildings from the state. In that time its student body has grown from 67 long course and 104 short course students to 529 long course and 518 short course students. Our original enrollment was 171. This year, it was 1,047. It is indeed remarkable that we have been able to house and take care of our students with any degree of success without a larger building fund than has been made available from state sources. The fact that you now have one and one-half million dollars worth of property under your charge, more than half of which is represented by buildings and equipment, is the best evidence of the business skill and success with which you have handled and disbursed the funds entrusted to your charge by the state and the federal government. The record reflects great credit on your business skill, foresight and integrity. It is little short of phenomenal, and I am sure you feel a just pride in what you have achieved along this line.

There is a movement on foot now to endow all types of education. England, even when in the throes of the most desperate war in her history, appropriated \$75,000,000.00 annually for the enlargement of instruction in technical and vocational industries. She recognized that this investment was essential to aid her in maintaining the leadership she had acquired in the markets of the world, and though possessed of only about one-third of the total wealth of the United States, and though 44 per cent of her gross wealth is now invested in war debts, she has not hesitated to add this great sum to her taxes because she recognized that education of the right type was vital to her future success in maintaining a dominating position in the workers of the world.

In our own country, institutions of various kinds are endeavoring to raise endowments of between two and three hundred million dollars. This is to be used in part for buildings and for equipment and in part for the payment of living salaries to professors. It cannot be that the balance of the country is wrong about the

duty, obligation and necessity of the hour. It cannot be that England is entirely mistaken about the need of greatly increasing the support accorded technical education.

In our own state, a plan is on foot to provide an endowment of \$1,000,000.00 for the University of Georgia to be used for building purposes. The Georgia School of Technology appears to have the same end in view. Emory University has been a beneficiary to the extent of several million dollars in the matter of buildings, equipment and endowment in recent years. It appears that Mercer University is also to be helped as a result of the drive recently put on. All these campaigns are worthy and laudable, and win the praise, support and commendation of this institution. Too much cannot be done for education if the funds acquired are wisely and judiciously expended. I submit, however, that the needs of this institution are as pressing and as necessary as those of any other in the state.

### **MILLION DOLLAR PROGRAM**

The time has arrived when the Georgia State College of Agriculture must get on a million dollar basis in so far as a building and equipment program is concerned. It must have a material increase in its maintenance fund. There is no sect, organization, or body of alumni to which it can appeal for help. It is too new and too young an institution. It is a child of the state devoted to her service. It can only look to legislative sources for any increase in its funds.

In the matter of maintenance, the very least we can hope to get along with is an annual income of \$125,000 a year. If the present cost conditions are to continue, or if there is to be a further rise in prices even, the increase which this suggestion contemplates would practically be absorbed without permitting of any material increase in our staff or permanent equipment.

There is every reason to anticipate a very substantial increase in attendance next fall, which will necessitate the sectioning of the freshman class. It is quite impossible to handle more than fifty men in a section. If this is to be done, several new instructors must be appointed. Is it reasonable to expect our professors to remain with us and work on their present salary? Is it not rational to think that a growing institution must of necessity create new divisions if it is to serve its constituency in a worth-while fashion?

At present, we are making no adequate provision for instruction in farm management or its associated lines of work. We have no teaching division as related to marketing. Yet, this is the greatest economic problem by which the farmer is now confronted. We are doing nothing along the line of agricultural journalism.

We have insufficient funds to maintain our veterinary division on the basis required by the Bureau of Animal Industry. No provision has been made by state appropriations for our home economics work, nor has any fund been assigned to help us in carrying forward the vocational instruction in agriculture or home economics.

There are a number of new courses which should be instituted in animal husbandry and in agricultural engineering. The poultry division needs additional help. The work in agricultural chemistry should be expanded. The work in forestry and horticulture cannot grow without more liberal support. Thus we are held in check all along educational lines.

Coal that was delivered to us for \$2.70 a ton is now costing us from \$8.00 to \$9.00. The materials we use for instruction have increased from one hundred to five hundred per cent in value. When these facts are taken into consideration, the request for an increase of our maintenance from \$90,000 to \$125,000 becomes indeed modest. It is easy to see what the money is needed for and how it may be expended with profit.

The plan takes into consideration no furtherance of the research problems although these are vital to the welfare of the institution, its student body and the state as a whole. The minimum sum needed for this purpose is \$25,000. The soil survey work cannot be organized on a basis commensurate with our need until the state extension fund is increased by another \$20,000. The important work which has been undertaken relative to pasture problems is stagnating by reason of the lack of funds. I suggest that an appropriation of \$25,000 for the purposes indicated would represent a wide and judicious investment on the part of the state.

Granted that we are given a maintenance fund such as conditions make essential, then a five-year building program should be immediately instituted. The state should understand and recognize the fact that an institution of this character cannot make progress if systematically hobbled through its inability to follow out a well recognized and unified building program. A majority of our sister states have recognized this fact and met it squarely, and Georgia cannot hope to keep her now high standing in the educational world unless something is done.

A million dollars is now being expended for buildings by the University of Tennessee. I understand that North Carolina has a definite and extensive building program for its agricultural and mechanical college. Alabama has made a modest appropriation of \$240,000 for a building program to be followed by her institution during the next few years.

## A MILL TAX

The question arises, "How is this money to be raised for buildings?" A system followed by Colorado for its agricultural college and by many other states is the levying of a mill tax. The Twenty-first General Assembly of Colorado made a levy of .09 of a mill per year for ten years for buildings for its agricultural college. The amount collected from this source is approximately \$30,000 a year and surely a rich state like Georgia could do a great deal more for its agricultural college.

To this end I am presenting for your consideration a five-year building program:

### Building Program

Completion of Animal Husbandry Building-----	\$100,000
Installation of adequate fire protection-----	25,000
Purchase of land adjoining College-----	25,000
Completion of Veterinary Building and Hospital-----	100,000
Removal and construction of adequate power plant-----	50,000
Erection of Men's Dormitory-----	250,000
Agricultural Science Building -----	150,000
Extension Division Building -----	100,000
Completion of Woman's Building -----	100,000
Research laboratories -----	150,000
Completion and equipment of Engineering Building-----	50,000
Total -----	\$1,000,000

We have been asked to undertake the instruction of five hundred of Georgia's wounded soldiers next fall. The Federal Board For Vocational Education proposes to send this number to us for retraining. These men fought and won the war for us. They shed their blood on behalf of this state and nation. They offered themselves as a sacrifice on the altar of their country. They have come back to us bruised and broken in body. They are now with the aid of the government striving to prepare themselves for a worthy service to the state and nation. They deserve our sympathetic support. We should lavish upon them the best we have or else we are not worthy of the sacrifice they made on our behalf.

They are not boasting of their accomplishment nor are they asking for more than an opportunity to live and work acceptably under the best advantages and conditions which the state can afford. If we are to receive and train these men, then it is absolutely necessary that the Animal Husbandry Building be finished with the utmost expediency. The initial appropriation of \$10,000 made for it was wisely and judiciously expended. An excellent foundation was built and a suitable frame-work erected. This is a large building, and the interior must of necessity be built of reinforced concrete. The exterior is to be bricked up under a slate roof to make it match the other buildings on the campus. This



could have been done for \$50,000.00 at one time. It will now cost close to \$100,000.00.

Immediate application should be made to the Legislature for a fund sufficient to provide laboratories and class rooms not only to take care of our wounded soldiers, but our regular students as well. The state cannot be charged with extravagance in view of the fact that it has only appropriated \$110,000.00 for building purposes in the last thirteen years.

### **FIRE PROTECTION**

Fire Chief Joyner of the state inspected our plant last fall and said that "the fire protection as now provided was totally inadequate." He insisted that an eight inch main should be run through the campus and that laterals be constructed therefrom which would entirely surround the principal structures. He said that a system containing dead ends was ineffective. From the best information I can obtain, it will now cost \$25,000.00 to put in a system such as he advised.

It is more imperative than ever that we secure immediate control of the property owned by negroes and adjoining the site now occupied by our new Woman's Building. It is desirable that this situation be corrected at once for reasons which need not be detailed at this time. This property could probably now be purchased at a cost of \$25,000.00. At the present time it constitutes a nuisance, is more or less of a menace, as well as being unsightly. I therefore think the Legislature should be petitioned this summer to provide the funds needed to purchase this land.

The buildings under your charge are now of such size and number and the equipment in them so valuable that a destructive fire would certainly result in a loss to the state of several hundred thousand dollars worth of property even though the buildings are insured to the amount of one-half their value and you are carrying in addition a considerable amount beside. These are the first items for which request should be made for endowment. I deem it necessary and only fair that you should ask for reimbursement for money spent on insurance which now amounts throughout the life of the college to a considerable sum.

It is also necessary that you have a repair fund. A plant of the size and character you have in charge cannot be kept in good condition for less than several thousand dollars a year. We need \$10,000.00 to expend for this purpose and a fund of \$5,000.00 annually thereafter. I recommend, therefore, that you request an immediate increase in our maintenance fund to prevent the further disintegration of our staff and that you make application for reim-

bursement on our insurance account, for the appropriation of a repair fund, and for the fund needed to complete the Animal Husbandry Building and install an adequate system of fire protection.

It is reported that the citizens of Georgia paid between \$30,000,000 and \$40,000,000 in income and excess profits taxes to the federal government in 1918. If this be true, it seems as if there should be no difficulty in securing the comparatively small sum of money indicated above so that this institution may be placed on a basis which will enable it to do acceptable work for its rapidly increasing student body and take care of the professors who have served it so faithfully up to the present time.

### RESUME

Our thirteenth year of work has been concluded, and in looking back over what has been accomplished during the session now closing, I find much for encouragement. We have had our periods of difficulty and depression. We have won victories along many lines, and we have sustained defeat. In reading history, I have frequently been impressed with the fact that a large percentage of the outstanding victories of a military nature seem to have been achieved after the battle was apparently lost. I have tried to present this point of view and understanding of life's struggles to our students and to tell them that no battle is ever lost if the lessons it teaches are recorded in the mind and made a part of the individual's equipment. The fact that we have had to meet adversity and overcome it has strengthened the purpose of our student body and of our faculty to achieve success. It has shown us our weaknesses, and it has served to keep us humble and contrite in heart.

Of the things accomplished that were worth-while, there is nothing that looms larger to my mind than that of the assembling of such a fine and representative body of women to direct the instruction of our home economics students and supervise the main divisions of our extension teaching. Eight of our women hold degrees from institutions like the University of Georgia and Columbia University. Three others will soon complete their courses of instruction at the University of Chicago and institutions of kindred types. Our graduating class will supply us with a group of carefully trained experts. It is safe to say that no college in the South has assembled a staff to direct the courses of the character we offer equal in training, calibre, personality and high ideals to that which is employed by this institution.

During the year we have made commendable progress in establishing co-education on a firm and lasting basis. Pleasant relationships have been established between the men and women students. In certain organizations, the women have been admitted to fellowship on an equal basis with the men. Their presence in the College

has been altogether delightful. Their attainments along scholastic lines is worthy of note, and their presence has added many pleasant occasions to the social life of the institution. The women who have come to us by reason of their poise and high character have won for themselves and for their sisters who will follow in their footsteps from year to year a firm place in the affection of our teachers and our student body alike. Thus, our experiment in co-education has been eminently successful, and I wish to thank and at the same time congratulate the initial class of young women who have helped so effectively to insure the full fruition of this undertaking.

We have endeavored throughout the year to further impress and sustain the traditions on which the life and welfare of the College is founded. The coöperation of the students and their interests in these matters has been an inspiration throughout the year.

A prominent citizen asked me not long ago how it was that the graduates of this institution have impressed themselves so strongly upon the state. He said, "All of your men seem to be workers. They seem to be inspired with a desire to serve. They do not hesitate to make any sacrifice of a worth-while character to advance the work they have in charge." I could only answer that we had done the best we could to impress upon them that happiness in doing worth-while service brought the largest reward which the world could offer to human beings, that work was one of the main maxims of the institution, that sacrifice was necessary to the achievement of success, that traditions and ideals of a wise type were sacred things to which our graduates must always hold no matter what misfortune might overtake them.

The fact that you have handled the finances of the College so successfully and have built up such an extensive plant and assembled such a representative equipment seems to have left the impression on the minds of many people that we make a great deal of money. This is not true, and it is an erroneous idea which should be corrected. There is some increment from our operations, but it is not large. If this were not so, then our status as a technical institution in agriculture would, it seems to me, be subject to criticism. If we cannot forward the various operations associated with our work on a basis to demonstrate the practicability of certain operations to our students successfully, I fail to see how we can hope to inspire them with an interest in the greatest of callings.

During the year our vocational work has been advanced and sustained successfully. There is a growing interest on the part of our student body in these courses as they pertain to both agriculture and home economics. We have had but little time in which

to create an atmosphere and a sentiment with reference to this new type of work. I think the probation period is now past however, and that we may regard vocational education as having won a place for itself both in the College and in the state as a whole. We look forward to the rapid growth and expansion of this work. In this connection, I wish to say that we could have accomplished but little save for the splendid coöperation and generous support accorded us by both the federal and state vocational boards. I wish especially to take this opportunity of thanking Dr. M. L. Brittain, State Superintendent of Public Instruction in Georgia, for his consistent aid and liberality in making these lines of work a success in our institution.

### SERVICE WORK

Below you will find an estimate of the value of the service work which the College is rendering the state. This has been made up as usual in accordance with your wishes. The utmost care and the greatest conservatism has been exercised in the statement of the facts set forth. You will observe that the record indicates a total service value of \$8,039,258. This is considerably less than the figures shown last year, but it is important to remember that a very large sum of war emergency funds made available from federal sources has been withdrawn since my last report was issued. The income provided for the maintenance of the institution at Athens is \$90,000.00. The state gives us \$42,500.00 for special extension work. Then there are the funds made available to us by the Smith-Lever Act and such contributions as were secured from the various bureaus of the Department of Agriculture, the county authorities and our friends in general. In all this represents a small sum compared with the large values expressed above. It can be safely said that the Georgia State College of Agriculture returns to the state a minimum of \$12.00 for each dollar expended.



**FOR EVERY DOLLAR SPENT IN AGRICULTURAL EDUCATION  
THE GEORGIA STATE COLLEGE OF AGRICULTURE  
RETURNS TWELVE DOLLARS**

529 long course students, increased earning capacity_	\$ 264,500
518 short course students, increased earning capacity_	20,720
22,219 boys and girls in the agricultural clubs added to wealth of the state:	
1,636,585 pounds of fruit and vegetables produced and canned -----	125,199
432,400 pounds of pork by the pig clubs----	51,768
64,102 pounds of beef by the calf clubs----	7,692
11,624 pounds of lint cotton and the seed--	5,529
68,558 bushels of corn by the corn clubs--	102,837
12,083 bushels of peanuts, Irish and sweet sweet potatoes, wheat, peas and velvet beans -----	18,125
Total value of all corn, pigs, calves, poultry, and miscellaneous products raised by negro club boys-----	154,852
6,262 women demonstrators preserved 43,717 pounds of dried fruits and vegetables, canned 617,304 quarts, and brined 26,454 pounds, the total valued at approximately-----	331,428
27,576 coöperative demonstration products with farmers growing cotton, corn, tobacco, small grains, peanuts, Irish and sweet potatoes, clovers, grasses and forage crops-----	275,760
3,119 purebred stallions, jacks, brood mares, dairy and beef cattle, hogs, and sheep bought for farmers' service -----	31,190
1,221,616 fruit trees, inspected, pruned, sprayed, treated for borers, or planted -----	61,180
13,888 improved farm implements placed on farms_	138,880
406,136 hogs, horses, cows, sheep and other farm animals treated for simple diseases-----	400,136
300,581 hogs treated with serum for hog cholera at \$9.00 each -----	2,204.648
Amount saved by County Farm Bureaus through coöperative buying and selling----	914,029
533,760 acres are mapped for soil survey work-----	533,760
1,157 soil samples analyzed chemically-----	23,140
144,580 bulletins distributed @ 10 cents each-----	14,580
10 fertilizer plots @ \$500 each-----	5,000
166,580 people addressed in meetings @ 25 cents each	41,645
Results from experiments in the oil content of cotton seed (800,000 tons) @ \$1.00----	800,000
18 land clearing demonstrations witnessed by 36,000 people -----	36,000
243 extension workers @ \$5,000 each-----	1,215,000
7 extension schools @ \$500 each -----	3,500
38 vocational agricultural high schools @ \$500 each -----	19,000
1,218 farm building plans furnished @ \$20 each----	24,360
67 experimental grass plots @ \$100 each-----	6,700
27 coöperative hog sales valued at \$300 each---	8,100
Total -----	\$8,039,258

## CONCLUSION

The College which you have cared for and fostered since its inception is now thirteen years of age. The flight of time has been so rapid that it seems but yesterday when the initial plans for work were undertaken. In the period which has elapsed you have had to meet and solve innumerable problems, some of which threatened at times to seriously interfere with our progress along what you deemed to be essential lines. Through your coöperative energy and fine leadership all of these obstacles have been cleared from the pathway of the institution and it has now attained an eminence in its special field which makes it a thoroughly constructive factor in the life of the state. A student clientele of which you have reason to be proud has been assembled and many splendid men and some very efficient women as well have gone forth as missionaries to give their lives to service work of the most fundamental character.

As I stand on top of Lumpkin Hill and look back over the difficulties which have been overcome under your wise leadership, I feel grateful that as an instrument in your hands, I have been permitted to participate in what has been accomplished. Your unified interest as a Board in the institution has always been one of its most valuable assets and has made the most onerous duties seem like a labor of love. The courageous and advanced position you have taken with reference to all phases of vocational education has helped to place and maintain the College in the vanguard in the special field of service which it aspires to fill. The continuance of the present policy, and the wise management and firm determination on your part to do that which is right and best at all times for the welfare of the College, its student body and the state, assure its further development on a basis commensurate with the needs of the constituency it is designed to serve.

The Chancellor of the University has again given many evidences of his appreciation and support of our work throughout the year. In every emergency he has been willing to fill the breach and his wise judgment and keen insight into human character have proven invaluable in bringing about many desirable adjustments. To obviate a conflict is infinitely more desirable than to win a battle, and this has always been the Chancellor's policy. His deep-seated appreciation and understanding of vocational education have helped us over many a difficult obstacle. His broad sympathy and generous consideration of others have won the love and esteem of our faculty and student body alike. It has been a great privilege to be associated with him in an executive capacity, and I only hope and trust that every one understands and will make known to him how much his services have been worth to the University and the state of Georgia as a whole. I can think

of no misfortune which might overtake the University equivalent to that of his withdrawal from the office over which he has presided with such dignity, fidelity and success. Feeling and knowing, as I think I do, the harassing nature of the issues with which he has had to deal at times, I hope all those who value the goodness and the greatness of the Chancellor will hasten to express to him their love, sympathy and appreciation.

Thanking you most sincerely for the splendid support and cordial consideration you have extended to me at all times, and trusting that the record of the year may have been such as to win your approbation, I am,

Very respectfully,

ANDREW M. SOULE,  
President.





\*ADDENDUM A

Report of the Treasurer of the Georgia State College  
of Agriculture

For the Year Ending May 31, 1920

RECEIPTS.

Balance on hand May 31, 1919 -----		\$ 30,677.70
State of Georgia—Maintenance -----	\$ 69,176.85	
State of Georgia—Extension -----	36,671.21	
State of Georgia —Farmers' Institutes -----	2,291.94	
United States—Rehabilitation work -----	25,329.90	
United States—Balance Voc. Sec. S. A. T. C. -----	3,110.00	
College—Vocational Section S. A. T. C. -----	202.50	
General and State Vocational Boards -----	10,947.60	
Cultural Education Laboratory Fees -----	60.50	
Cultural Engineering Laboratory Fees -----	325.00	
Cultural Chemistry Laboratory Fees -----	878.95	
Economy Laboratory Fees -----	696.25	
Domestic Husbandry Laboratory Fees -----	405.00	
High School Fees -----	955.00	
Field Experiments -----	2,576.13	
Extension Field Experiments -----	1,251.04	
Forest Laboratory—Fees and Receipts -----	525.38	
Home Economics Laboratory—Fees -----	227.04	
Home Cultural Laboratory—Fees -----	295.00	
Home Agriculture Receipts -----	4,279.10	
Home Husbandry Laboratory—Fees and Receipts -----	4,808.82	
Primary Laboratory—Fees and Receipts -----	1,877.40	
Interest on Deposits -----	1,362.82	
Library Reservation Fees -----	40.00	
Library Fund Income -----	50.00	
Library Fund Repayment of Loan -----	30.00	
Georgia Bankers' Loans -----	200.00	
Advanced Registry of Cattle -----	1,150.88	
Inventory -----	18,651.45	
Inventory -----	10,613.78	
Home Laboratory Receipts -----	14,259.84	
Home Laboratory Receipts -----	4,399.26	
Home County Agents Fund -----	14,797.24	
Contributions for scholarships, prizes, research work, demonstrations, etc. -----	15,864.35	
Miscellaneous -----	3.90	\$248,314.13

Amounts represented by canceled checks and money returned -----

7,572.74

\$286,564.57

## DISBURSEMENTS.

### College Accounts:

(Covered by State maintenance appropriation, vocational boards' appropriations, fees, department receipts, etc.)

Agricultural Chemistry Laboratory -----	\$	1,529.41	
Agricultural Education Laboratory -----		959.11	
Agricultural Engineering Laboratory -----		1,161.10	
Agronomy Laboratory -----		2,002.30	
Animal Husbandry Laboratory -----		605.26	
Building and Repair -----		838.03	
Cavalry Unit -----		2,049.06	
Contingent -----		1,719.55	
Cotton School -----		1,255.63	
Dairy -----		2,134.45	
Feed Stuffs -----		6,866.52	
Fertilizers -----		1,034.77	
Field Experiments -----		748.75	
Forestry Laboratory -----		838.46	
Grounds -----		1,584.40	
Heat, Light and Water -----		372.36	
Home Economics -----		975.10	
Horticulture -----		4,862.76	
Horticultural Laboratory -----		808.62	
Janitors -----		1,163.42	
Labor -----		10,003.83	
Library -----		770.90	
Live Stock -----		1,378.29	
Miscellaneous -----		1,462.58	
Motor Transport Unit -----		1,335.00	
Postage and Stationery -----		839.99	
Poultry Husbandry -----		5,559.88	
Publications -----		489.42	
Salaries -----		41,714.52	
Tools and Implements -----		1,830.39	
Traveling Expenses -----		683.39	
United States Rehabilitation work -----		11,250.44	
Veterinary Laboratory -----		2,342.37	
Vocational Education -----		17,335.93	
Woman's Building -----		64,947.95	\$195

### Extension Accounts:

(Covered by State appropriation for extension work, for farmers' institutes, and by department receipts)

Agronomy Equipment -----	\$	212.98
Agronomy Traveling Expenses -----		1,541.82
Animal Husbandry -----		2,161.87
Contingent -----		2,924.79
Field Experiments -----		3,842.30

Heat, Light and Water -----	2,078.18	
Horticulture Equipment -----	56.07	
Horticulture Traveling Expenses -----	923.97	
Institutes -----	4,763.69	
Janitors -----	932.25	
Postage and Stationery -----	532.28	
Salaries -----	24,695.20	
Soil Survey Laboratory -----	1,226.30	
Soil Survey Traveling Expenses -----	1,232.71	
Traveling Expenses -----	770.44	
Poultry Husbandry -----	1,643.15	
Publications -----	400.33	\$ 49,938.33

#### **Planeous Accounts:**

Covered by donations and revolving funds of cream-		
ery and serum laboratory, etc.)		
Advanced Cattle Registry -----	\$ 1,507.50	
Bankers' loans to students -----	140.00	
Boll Weevil School -----	71.40	
Cotton Investigation -----	37.50	
Creamery -----	4,237.50	
Dormitory Refunds -----	5.00	
Dormitory Furnishing -----	3,138.96	
Fair Funds -----	807.98	
Forestry Camp -----	34.00	
Grassings Scholarship -----	82.00	
Pasture Demonstration -----	912.38	
Prizes -----	286.49	
Scholarships -----	4,986.42	
Serum Laboratory -----	16,767.76	
Special County Agents Fund -----	15,731.42	
Tractor Demonstration -----	1,791.01	\$ 50,537.32

#### **ional Section S. A. T. C.:**

Various small accounts -----	53.14
Emergency Building:	
Small accounts -----	16.50

**\$285,999.23**

**ds:**

Represented by canceled checks and money returned	7,572.74
---	----------

**\$303,571.97**

<b>Receipts -----</b>	<b>\$286,564.57</b>
<b>Disbursements -----</b>	<b>303,571.97</b>

Overdraft May 31, 1920 -----	\$ 17,007.40
------------------------------	--------------

This overdraft has been made necessary on account

of the State being two months in arrears with its appropriations and the Federal government being two months in arrears with its rehabilitation payments).

### FEDERAL SMITH-LEVER ACCOUNT.

#### Receipts.

United States of America -----	\$182,018.68	
Refunds to various accounts and canceled checks-- -----	1,560.50	\$18

#### Disbursements.

Salaries -----	\$149,576.49
Stationery and Printing -----	6.05
Postage, Telegraph, Freight, Express -----	149.39
Supplies -----	150.34
Tools and Machinery -----	12.75
Furniture and Fixtures -----	46.75
Contingent -----	8.35
Traveling Expenses -----	16,739.35

\$166,689.47

Expenditures represented by refunds and canceled checks	1,560.50	\$16
---	----------	------

Cash Balance May 31, 1920 -----	\$ 1
---------------------------------	------

### STATE SMITH-LEVER ACCOUNT.

#### Receipts.

State of Georgia -----	\$ 81,900.00	
Refunds to various accounts and canceled checks -----	2,901.15	\$ 8

#### Disbursements.

Salaries -----	\$ 59,750.09
Labor -----	1,695.73
Publications -----	5,540.93
Stationery and Printing -----	2,342.15
Postage, Telegraph, Freight, Express -----	1,179.00
Supplies -----	2,944.63
Tools and Machinery -----	1,018.65
Furniture and Fixtures -----	617.80
Scientific Apparatus -----	234.94
Traveling Expenses -----	16,057.67
Contingent -----	401.55

\$ 91,783.14

Expenditures represented by refunds and canceled checks	2,901.14	\$ 9
---	----------	------

Overdraft May 31, 1920 -----	\$
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(This overdraft has been made necessary by the State being two months in arrears with its appropriations).



(The State appropriation covering the fiscal year July 1, 1919-July 1, 1920, for \$109,085.02, of which \$81,900.00 has been received and the remaining 185.02 will be paid by the State before the end of the fiscal year on July 1st). Under the terms and provisions of the Smith-Lever Extension Act, all funds obtainable from State or Federal sources must be spent under definitely approved contract agreements between the Trustees of the Georgia State College of Agriculture and the United States Secretary of Agriculture. The expenditures under those contracts from July 1, 1919 to June 1, 1920 are given in this report. These figures do not correspond with the report to be made to the Federal government, as its fiscal year runs from July 1st to July 1st and the report to be made to the Federal government July 1, 1920, will contain in addition to these figures the business transactions during June, 1920.

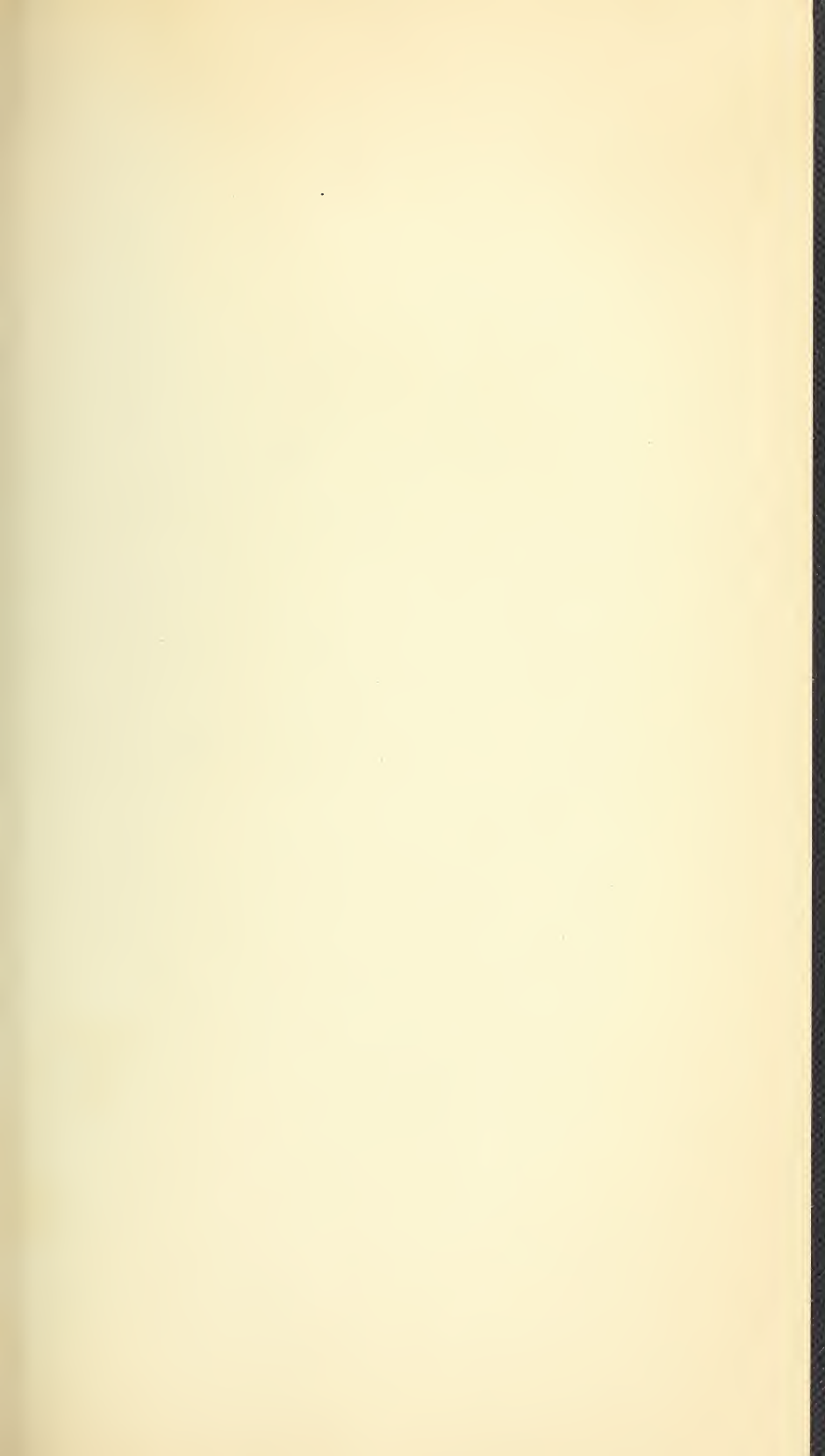
#### FEDERAL PROJECT DISBURSEMENTS.

Project 3—County Agents .....	\$110,425.89
Project 4—Home Economics .....	56,263.58
	<hr/>
	\$166,689.47
Expenditures represented by refunds and canceled checks.....	1,560.50
	<hr/>
Total Federal Disbursements .....	\$168,249.97

#### STATE PROJECT DISBURSEMENTS.

Project 1—Administration .....	\$ 20,369.26
Project 2—Publications .....	5,540.93
Project 3—County Agents .....	9,809.98
Project 4—Home Economics .....	7,052.50
Project 5—Boys' Club Work .....	6,924.18
Project 6—Movable Schools .....	6,805.87
Project 7—Farmers' Field Meetings .....	1,454.14
Project 8—Educational Exhibits at Agricultural Fairs .....	1,934.29
Project 9—Live Stock .....	4,470.65
Project 11—Girls' Poultry Clubs .....	2,209.35
Project 12—Agronomy and Farm Engineering .....	9,995.62
Project 13—Dairy .....	3,638.85
Project 14—Forestry .....	793.39
Project 15—Marketing .....	2,172.46
Project 16—Horticulture .....	5,572.46
Project 17—Engineering .....	3,039.21
	<hr/>
	\$ 91,783.14
Expenditures represented by refunds and canceled checks .....	2,901.15
	<hr/>
Total State Disbursements .....	\$ 94,684.29









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1921/22  
Vol. X, No. 15

JUNE, 1922

Bulletin 254

# ANNUAL REPORT

## OF THE PRESIDENT

STATE COLLEGE OF AGRICULTURE  
AND THE MECHANIC ARTS  
1921-1922



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## BULLETIN

Georgia State College of Agriculture  
Athens, Georgia

ANDREW M. SOULE, President

# STATE COLLEGE OF AGRICULTURE

## Of the University of Georgia

### ADMINISTRATIVE, TECHNICAL AND EXTENSION STAFF

ANDREW MacNAIRN SOULE	President
JOHN RICHARD FAIN	Professor of Agronomy
MILTON PRESTON JARNAGIN	Professor of Animal Husbandry
THOMAS HUBBARD McHATTON	Professor of Horticulture
WILLIAM ARCHER WORSHAM, Jr.	Professor of Agricultural Chemistry
JAMES PHILANDER CAMPBELL	Director of Extension
JOHN TAYLOR WHEELER	Professor of Agricultural Education
MARY ETHEL CRESWELL	Director of Home Economics
GEORGE ALEXANDER FAIN	Professor of Agricultural Engineering
ALBERT G. G. RICHARDSON	Professor of Veterinary Medicine
JAMES HERBERT WOOD	Professor of Poultry Husbandry
THOMAS WALTER REED	Registrar
LEONIDAS MYERS CARTER	Professor of Soil Chemistry
GEORGE ARTHUR CRABB	Professor of Agronomy, in Charge of Soils
JOHN KYRGESS GILES	Assistant Director of Extension
ETHEL REESE	Secretary to the President
MARION WAYNE LOWRY	Associate Professor of Soil Chemistry
ROSS RENFROE CHILDS, Professor of Agronomy, in Charge Cotton Industry	
EDISON COLLINS WESTBROOK	Farm Management Specialist
PAUL TABOR	Field Crop Specialist
PAUL W. CHAPMAN	State Supervisor Vocational Education
LOIS PAULINE DOWDLE	State Supervisor Girls' Clubs
BESSIE STANLEY WOOD	State Supervisor Home Demonstrations
JULIUS EUGENE SEVERIN	Associate Professor of Veterinary Medicine
WALTER CLINTON BURKHART	Associate Professor of Veterinary Medicine
LAFAYETTE MILES SHEFFER	Associate Professor Agricultural Education
JAMES GRANBURY OLIVER	State Supervisor County Agents
GEORGE VIVIAN CUNNINGHAM	State Supervisor Agricultural Clubs
HARLOW WILLIAMSON HARVEY	Specialist in Landscape Gardening
WILLIAM BRADFORD	Assistant State Supervisor Agricultural Clubs
WILLIAM OLIN COLLINS	Associate Professor of Soil Chemistry
NELLE MAY REESE	Librarian
ROBERT CUMMING WILSON	Professor of Materia Medica
ERNA ELIZABETH PROCTOR	Associate Professor of Foods and Cookery
ROSALIE VIRGINIA RATHBONE	Associate Professor of Textiles & Clothing
EPSIE CAMPBELL	Assistant Supervisor Vocational Education
MRS. EDITH MAY ANDREWS	Associate Professor of Institutional Economics
A. LAURA E. BLACKSHEAR	Illustrator
FRANK WARD	Cotton Specialist
LESLIE VINCENT DAVIS	Supervisor of Fertilizer Investigations
DEFOREST HUNGERFORD	Scientific Assistant in Farm Management
CHARLES EDWARD KELLOGG	Beef Cattle Specialist
LEO HARTLAND MARLATT	Field Agent in Cheese Production
WILLIAM EARL BROACH	Field Agent in Agricultural Engineering
CECIL NORTON WILDER	Associate Professor of Agricultural Chemistry
HERMAN VICTOR PERSELLS	Hog Cholera Specialist
GEORGE HENRY FIROR	Field Agent in Horticulture
HADEN MAYO McKAY	Field Agent in Horticulture
MILTON CLEVELAND GAY	State Supervisor of Marketing
WYATT ARNOLD CLEGG	Associate Professor of Agricultural Engineering
DMORY DEWITT ALEXANDER	Associate Professor of Agronomy
JULIAN HOWELL MILLER	Associate Professor of Horticulture
GEORGE PAUL SAYE	Associate Professor of Animal Husbandry
PAUL T. CONNOLLY	Associate Professor of Veterinary Medicine
CURRY LAFAYETTE VEATCH	In Charge of Practice School
MARTHA McALPINE	Social and Physical Director
FRANK W. FITCH	Field Agent in Dairy Husbandry
FREDERICK WILLIAM BENNETT	Associate Professor of Dairy Husbandry
CHARLES WILLIAM SUMMEROUR	Editor
THOMAS D. BURLEIGH	Associate Professor of Forestry
GUY L. SMITH	Drainage Engineer
JULIAN GORDON LIDDELL	Field Agent in Swine Industry
SUSIE BURSON	Teacher Practice School
FARRIS CARTER CHANDLER	Asso. Professor of Agricultural Education
ELMO RAGSDALE	Field Agent in Marketing Perishables
WILLIAM D. PASCHALL	Co-ordinator Rehabilitation Section
ROBERT W. JONES	Associate Professor of Veterinary Medicine
JULIUS M. ELROD	Associate Professor of Agronomy
MORRIS W. H. COLLINS	Supervisor Rehabilitation Projects
WALTER P. WARREN	Assistant Registrar
ROBERT M. SOULE	Adjunct Professor of Agricultural Chemistry
WADE H. RICE	Adjunct Professor of Poultry Husbandry
WALDO S. RICE	Adjunct Professor of Animal Husbandry
RUFUS L. KEENER	Adjunct Professor of Horticulture
JOHN E. EVERETT	Adjunct Professor of Agricultural Engineering
DUPRE BARRETT	Adjunct Professor of Forestry
LEWIS R. SMITH	Adjunct Professor of Forestry
ROBERT L. McWHORTER	Instructor in Rehabilitation Section
PAULINE McKinLEY	Instructor in Rehabilitation Section
MRS. M. W. LOWRY	Instructor in Rehabilitation Section
EDITH V. CRESWELL	Instructor in Home Economics
MARIE ANDERSON	Food and Nutrition Specialist
MRS. E. D. ALEXANDER	Instructor in Rehabilitation Section
SUSAN MATHEWS	Special Agent in Home Demonstration Work
PIARES OBADIAH VANATTER	Superintendent of Field Experiments
AMBROSE PENN WINSTON	Foreman of College Farm
CHARLES BOWDEN SWEET	Foreman of Greenhouse and Grounds
For names of district and county agents see extension staff.	

## Report of the President, State College of Agriculture and the Mechanic Arts

---

TO THE HONORABLE BOARD OF TRUSTEES

of the Georgia State College of Agriculture.

Gentlemen:

It is my privilege to transmit herewith my fifteenth annual report dealing with the work and progress of the Georgia State College of Agriculture and the Mechanic Arts for the session of 1921-1922.

The year has been one of gratifying growth in the face of as severe a financial depression as any through which our country has ever passed. The general zeal and interest in higher education has been maintained in an unabated form. Instead of there being a shrinkage in the attendance upon our long courses there has been a very marked increase. Baleful and widespread as was the influence of the war, it still seems to have left the definite impression upon the minds of our people that education was never more essential to their welfare and progress. If it has created a sentiment of this character, can we regard it altogether and wholly in the light of an evil genius?

Unfortunately, the widespread interest in higher education evidenced by the youth of the state has not been met with as hearty and generous financial support as the situation warrants or demands. In other words, there has been no adequate increase in the facilities provided for the training of the youth of Georgia along the highly specialized lines of agriculture, home economics, and the related arts and industries such as the existing situation makes essential. The youth of the state are asking for bread. Shall they be given a stone in answer thereto? The continued overcrowding of our colleges can only be viewed with alarm. It is manifestly impossible for them to take proper care of those they are already expected to serve and train acceptably.

The times insistently demand the most liberal endowment which has ever been accorded higher education in the history of the state, or the consequent denial or withdrawal of the privileges of this type of instruction from hundreds of the brightest and most capable men and women within the confines of the commonwealth. There is no gainsaying this situation. It is an actuality. It is a problem which requires immediate consideration. Upon its correct solution depends the future progress and development of the state.



## WHAT OF THE FUTURE?

Thoughtful students of economics believe that the period of depression which has existed for the past two years has touched its lowest level, and that we are now on the upgrade. A careful study of recuperation by the U. S. Department of Commerce indicates that a great improvement over the conditions which pertained a year ago has already taken place. This study indicates that business conditions are fair in the western and southwestern part of Georgia. The southern states seem to be recovering as rapidly as any section of the country, and the East shows a decided improvement over the West.

Rationality is now our greatest need. We have definitely turned the corner in the matter of reconstruction. What we need is a fresh infusion of idealism. Let us eliminate the hate and strife from our hearts and replace sentiments of that character with the dogged type of courage which made it possible for the doughboy to go forward, even when his shoes were worn out and his feet lacerated, his canteen empty, his emergency rations all gone, and the thing called sleep and repose only a haunting nightmare. The mellowing influences of kindness and good fellowship, of trust and industry, will quickly solve the most difficult of our problems and bring about a renewal of confidence and usher in a definite and constructive period of prosperity.

## TRADE RELATIONSHIPS

Many are concerned about the future of our trade relationships. The Hon. Herbert Hoover has already pointed out that we have given a billion dollars in charity to the European governments, and that we have already extended them credit and help in the signing of the Armistice. It would appear as though we had acted more generously than we have been credited with doing.

Mr. Hoover very wisely says that the European nations must first put their houses in order and replace the present atmosphere of war with an atmosphere of peace; second, reduce armaments; third, establish reparation payments on a basis that will insure their being carried into effect; fourth, balance up their national budgets so that income and expenditures may be reconciled; and fifth, return to the gold standard as quickly as possible.

It is obviously impossible for this country to do much more for the European nations until they comply with these suggestions. It would appear to be unwise that it should. This does not mean that our trade with them will of necessity be curtailed or limited any more than it has been in the recent past. The probabilities are that it will expand considerably. This can be accomplished and the interests of America safeguarded, and in that event there should be some improvement in the demand for cer-



tain of our manufactured goods, and certainly for the raw materials produced on our southern farms. This being true, the farmer and the manufacturer may look toward the future with a considerable degree of confidence.

### FARMERS TRYING TO FIND THEMSELVES

The advent of the boll weevil was a staggering blow to the farmers of Georgia. In spite of all the efforts made to prepare them for its onslaught, the cry of "Wolf! Wolf!" so frequently heard and discounted, lulled them into a false sense of security. Like all plagues which have afflicted humanity, the weevil struck suddenly and with devastating fury. The toll it took of our cotton crop last year was appalling. Coming as it did upon the heels of the tremendous financial losses and depression from which our people had suffered, it left them in a sort of coma, and so perplexed that they did not know what to do.

Those who concluded that they would limit cotton production began at once to seek for some crop which they could substitute therefor. Their search was disappointing, and this further complicated the situation. Heroic efforts have been made by this institution and its field workers to explain to our farmers for some years that no one crop could take the place of cotton, but that when its cultivation was minimized a considerable number of crops must be utilized in its place, that animal industries must be magnified and encouraged, and our whole policy of land cultivation and farm management reorganized.

It is not surprising that our farmers should have found such radical changes difficult of assimilation and institution in practice, and it is indeed encouraging that under the circumstances so large a measure of progress has already been achieved. It is quite certain that marked development along the lines of diversified cropping will be evidenced very shortly, for the lesson, while bitter and costly, none the less proved to be the stimulus which was needed.

That the transference from an all-cotton to a diversified basis can be accomplished with advantage to our people has been definitely demonstrated on many Georgia farms already. The manner in which this transformation can be easily and simply worked out on the one or two-mule cotton farm is set forth below. These figures were prepared by Prof. DeF. Hungerford of the Division of Agronomy. Their careful study and perusal will be of benefit to all of our landowners. They illustrate graphically, and yet simply, the manner in which the agricultural emancipation of our people is to be brought about and cotton still maintained as our primary money crop, even in the face of the heaviest boll weevil infestation.

**COTTON VS. DIVERSIFICATION**  
**Income Two-Mule Cotton Farm**

Crops	Acres	Surplus sale or home use	Av. Yield 1911-1920	Av. Farm price 1911-1920	Value 10-year price	Value present price
Cotton	34	34	176.8 lbs.	\$ 17.08	\$1070.00	\$1021.90
Cotton seed	(34)	(34)	353.6 lbs.	39.35	236.54	120.00
Corn	16	1	15 bu.	1.11	16.75	7.50
Fodder for stock						
Garden	½				100.00	66.66
2 mules—work stock						
2 hogs—fattened each year					30.48	18.00
1 cow—2100 lbs. of milk and 1 calf					52.00	49.50
25 hens, 112 doz. eggs and 50 chickens					53.12	70.00
Total					\$1558.89	\$1353.56

**Income Two-Mule Diversified Farm**

Cotton	12	12	176.8 lbs.	\$ 17.08	\$ 377.64	\$ 360.67
Cotton seed	(12)	(6)	353.6 lbs.	39.35	41.71	21.20
Corn	24		15 bu.			
Oats	10	6	20 bu.	0.88	105.60	78.00
Wheat	4	4	10.7 bu.	1.88	79.60	63.20
Cowpea hay	14	6	1.23 T	19.17	141.47	132.84
S. Potatoes	5 ½	5 ½	88 bu.	0.86	416.24	240.40
Home supplies	2 ½	2 ½			360.55	363.00
Grazing Crops	5	for hogs				
Pasture	9 ½	for stock				
2 mules—work stock						
2 brood sows, producing 20 pigs per year					304.80	180.00
2 cows, yielding 4200 lbs. milk and 2 calves					104.00	99.00
50 hens, 225 doz. eggs, and 100 chickens					106.25	140.00
Total					\$2037.90	\$1678.31

**BREADTH OF SCHOLARSHIP FUNDAMENTAL**

Breadth of scholarship is, after all, probably the most fundamental of our needs. "Signs are not wanting," says Prof. H. C. Morrison of the University of Chicago, "that the field of higher education is beginning to be stirred with concern for the intellectual interest of its schools." Dr. R. A. Milliken, of the California Institute of Technology, says, "We have succeeded in this country marvelously well in quantity or mass education, as we have in quantity production. We have not yet succeeded as well as have a number of other countries in quality education. We have not produced one-half, and I think I may say one-fifth, as many out-standing scientific and technical men in proportion to our population as have Holland, England, Germany, or France."

"According to this educational leader, the English Honor System, to take but one example, has successfully trained the men in England and Canada as nothing in this country has thus far done,

and after all, the progress of civilization is determined by the very few men of vision and capacity which each age develops.

Finally, he says that "Science in itself is not the most important thing in the world, but that the salvation of the world is to be found in the cultivation of science together with the cultivation of a belief in the reality of moral and spiritual values. Science alone may destroy this world instead of saving it. To prevent this catastrophe courses in technical institutions must be differentiated to such an exceptional degree as to permit proper emphasis being laid in their curriculum upon cultural and spiritual development."

This latter appears to be one of the main defects in our own educational system at the present time. It certainly accounts for the failure of the German's war of aggression against civilization and humane institutions. It constitutes the pitfall which lies immediately ahead of education in America. It represents the evil genius which we have been combating in this institution through every agency at our command for more than a decade.

It is on account of this danger that such a great effort has been made to give breadth to our courses of study, to buttress the applications of class room instruction about by things which are fundamentally spiritual and eliminate from our scientific teaching the supposed conflict with the best accepted religious interpretations and thought of this day and generation. That this has been accomplished in a large measure is evidenced by the attitude of our students and graduates towards religious influences and institutions.

It has now become a fixed part of the policy of the College to endeavor to inspire the student body with the finest spirit of sacrifice and the highest type of idealism, and it is hoped to maintain our courses on a basis which will increasingly add to their cultural values, while emphasizing as completely as possible scholarly training along scientific lines and acceptable preparation as vocational and professional experts in the particular field in which the individual may be specializing.

### **THE EVIDENT NEED OF TECHNICAL TRAINING**

That acceptable leadership still constitutes our greatest need in the field of agriculture is evidenced on every hand. It is manifestly impossible to improve rural conditions or increase the earning capacity of the landowner, cropper or tenant save through educational processes. That we need to do something along this line is evidenced by the figures presented below, which were prepared by Professors Westbrook and Hungerford of our Farm Management Office. They show that the income per farm in Georgia, even in 1919, which was probably the most prosperous year in the entire history of our agriculture, was \$1,355.00.

	1919 (1920 Census Report)	1921 (Bureau Crop Esti.)
Total value of crops	\$540,613,626	\$156,000,000
Expenses		
Fertilizer - - - - -	46,196,434	20,000,000
Hired labor - - - - -	19,016,703	4,754,176
Cropper labor - - - - -	74,386,315	21,303,094
Mule and horse feed - -	99,922,944	34,669,821
Implements cost - - -	12,147,800	7,487,660
Total Expense - - - -	\$251,670,196	\$ 88,214,751
Net Receipts - - - -	\$288,943,430	\$ 67,785,249
Gross receipts per fm.-	2,535	732
Expenses per farm - -	1,180	413
Income per farm - - -	1,355	319

Note:—While some of the figures given above are estimates, they are as accurate as can be obtained at this time.

We have an average of about five in each farm family, and out of this income, first of all, had to be deducted the cost of farm operations. There was then left less than \$350.00 per capita available for all purposes—of providing clothing, amusement, education, and opportunities and privileges of every character and description. This sum would not go very far at the prices which prevailed in 1919.

On the other hand, contrast the figures of 1919 with those of 1921, when the gross income per farm appeared to be \$732.00, the expenses of operation \$413.00, and the income \$319.00. This was only about \$60.00 per capita. It is not surprising that our agriculture languished under such circumstances, or that our degree of prosperity was the lowest known in many years. The correction of this condition can only be achieved through educational processes.

The fact that we are importing \$150,000,000.00 worth of food each year which we could and should raise at home indicates that it should not be difficult to make progress in the right direction. If this were done, then in spite of the low prices which now prevail the farm income in Georgia for 1922 would be at least double what it was in 1921. If we add to this an acceptable degree of diversification along the line of animal husbandry, we may increase the income per farm to \$1000.00 or \$2000.00 per individual, even in the face of existing conditions.

It would appear to be simple to accomplish these ends, but there are many difficulties in the way. An entirely new viewpoint must be developed and a new set of facts assimilated and put into practice. The generation now at the helm may not take kindly to many of these suggestions, but the new generation will gladly make the necessary changes, provided the state, through a sufficiently liberal endowment of agricultural educational agencies,



places this information before them in a tangible and acceptable form.

### SCIENTIFIC COOPERATION ESSENTIAL

The utter lack of co-operation which has characterized most of our farm operations has held back agricultural progress to a remarkable degree. Co-operation is something that is wholly desirable. In its final analysis it means a unified spirit of service pervading the community, the state, and possibly even extending into national affairs. To harmonize, let us say even in a community, the hundred opinionated and conflicting ideas of a group of individuals is a tremendous task, yet there can be no successful co-operation unless this end is attained. From the community, co-operation must proceed to the county, say as a unit, and from there in ever-widening circles until it reaches its climax in a state or a national organization.

Co-operation is an educational process. It is something that takes time. The football coach finds that he must train his men for several months before they enter a game. If he can have the same eleven men play for a period of four years he develops a championship team. These men may not all be physical giants, but the spirit of co-operative and systematic action with which they synchronize their efforts makes them extremely formidable, even though they may lack some other desirable qualities. If it takes so much painstaking effort and such a long period of time to develop a winning football team, can we expect the seeds of co-operation to fructify immediately and yield a desirable fruitage and results?

Here again, as in all the uplifting processes that tend to elevate humanity and place it on a better and more efficient plane of action, education is destined to play a most important part. I may illustrate my meaning very graphically by what has been accomplished along co-operative lines here in Georgia. First of all, our peach growers have made a marvelous record in marketing one of our most perishable crops at distant points.

How has this been brought about? Not by accident, but by the most careful and exacting study of marketing demands and requirements. The fruit to be shipped must be of prime quality before it is accepted. This means that the trees must be carefully and scientifically pruned and sprayed, the orchards properly disinfected, the ground thoroughly cultivated, the trees systematically fertilized, the fruit picked at just the right time, sorted with the utmost care, and packed and shipped with expedition in pre-cooled cars which are iced from time to time as they make the journey to distant markets.

In addition to all this, there must be a study of market requirements and needs and a proper distribution of the fruit after it is prepared for market. Are these anything but educational pro-

cesses applied to the business of peach growing? I think not.

Similarly the Co-operative Watermelon Growers' Association of Georgia has shown what can be done with this crop if it is handled in a scientific manner. They require, for instance, that one variety of seed be planted, that a certain spacing be followed in the fields, that two vines only be left to a hill and two melons to the vine, and that the melons be picked, sorted and prepared for market according to certain standard rules and regulations.

It is a business based strictly on an educational foundation. We can extend the idea of co-operation to the handling of other farm crops as rapidly as may be desirable, and our success will always be in proportion as we educate our growers to maintain acceptable standards in production.

### CREDIT UNIONS

The farmer has suffered very greatly during recent years from the need of adequate credit, and many remedies have been suggested for the amelioration of the situation by which he has been confronted. Some of these have proven very helpful. In the main, however, thousands of farmers have been unable to secure sufficient credit because of the conditions by which they were confronted. It has been suggested that the credit union would have enabled our farmers to secure funds when all our agencies had failed.

As there is a movement on foot to establish credit unions in the state through the enactment of essential and safeguarding legislation, a short discussion of their purpose and the ends which may be attained in Georgia through the institution of these organizations will not be inappropriate.

The object of a credit union is to promote thrift and to provide its members with credit facilities. The credit union is a bank in miniature which operates in a local community. The shares may be paid for in cash or in regular weekly or monthly installments. Payments may be as low as ten or twenty-five cents weekly.

The credit union is essentially a bank of small units. From the funds paid in, loans are made to members for provident purposes at low rates of interest. A credit union may be organized in Massachusetts, for instance, by seven persons who are residents of the commonwealth. In North Carolina, seven or more persons residing in the state may organize a credit union. The original Canadian credit union at Levis, Quebec, started with a capital of \$26.00. Now it has total assets well in excess of a million dollars.

Officers of a credit union cannot borrow from it. Members have a single vote, and as the funds are derived from members they are loaned exclusively to members. Naturally the over-head operating expenses are low because of the simplicity of the organization.

Credit unions may of course be organized for the benefit of

wage earners as well as farmers. Rural credit unions organized under the laws in effect in North Carolina have served the farmers of various communities in that state very acceptably. An analysis of a group of consecutive loans made by a small rural credit union was as follows: Total loaned, \$4,385; for fertilizers, \$1,675; livestock, \$815; food and feed stuffs, \$365; labor, \$400; farm machinery, \$75; cows, \$395; auto trucks, \$300; to close loan with Federal Land Bank, \$300; sickness, \$60.

Co-operative buying as well as loaning has also been successfully carried forward by rural credit unions in several of our states. That the credit union can be made to serve a most acceptable need in Georgia is self-evident from these facts. It is not an experiment in any sense of the word. Enough has been done in our own country to prove the stability of this type of organization. In Belgium, for instance, there were 458 credit unions in 1909, in France 2,983, in Italy 690, and in Germany there was one bank for every 1,600 of the population. The business done by these banks in foreign countries runs into billions of dollars annually.

There is no limit to the benefits which may be made to accrue to our agriculture through aggregating the credit of groups of individual farmers. It seems to offer one of the best means of stabilizing our agriculture and providing our farmers with funds developed out of their own unutilized resources.

### VOCATIONALIZING HIGH SCHOOL COURSES

There are forty-eight high schools in the state maintaining departments of vocational agriculture which are manned by graduates of this institution. These men are doing a fine service, not only in the field of high school education and development, but also in bringing better farm practices to the communities in which they serve.

Note carefully the following examples of what has been accomplished through the agency of this work.

Leonard Lee, one of the boys in the agricultural class at the Hopeful High School, wrote the following interesting letter about how he, together with his classmates, bought, fed and sold a carload of hogs at a good profit:

"I had ten hogs in my project which on December first weighed 107.8 pounds. When they were delivered to Camilla they weighed 206 pounds each. The hogs were sold on March 14th, instead of April first as we had planned, because after we started feeding, the farmers organized a hog sale association and we thought that we would rather join them than to try to have a sale of our own two weeks later.

"At this sale seven hundred hogs from all parts of the county were assembled and sold to the highest bidder. Before the sale started, one Georgia packing company offered to buy our hogs

at the same price at which the other hogs should sell plus a premium of one cent a pound for all hogs that would kill hard. The highest bid for the day was \$8.44 per hundred pounds.

"After all the records were completed, it was found that instead of \$3.00 per head profit as my teacher had guaranteed, I had made an average profit of \$8.43. Instead of six per cent profit on my investment which some people told me would be more desirable, I made ninety-one per cent profit. Instead of selling my corn for forty cents a bushel, as was being paid at the elevator, my hogs made it possible for me to obtain \$1.60 per bushel for it. They made an average daily gain during the feeding period of 1.34 pounds at a cost of \$.045 per pound. I am well pleased with the results of my hog feeding project and now I find many boys and men in the community who once thought nothing could be made from hog feeding, are now preparing to make corn fattened hogs one of the money crops of their farms."

"At a sale in Camilla their seventy-eight head of hogs, fed by this agricultural class, sold for more than \$1,000.00 and netted them a profit of \$474.82."

"Another recent success in teaching boys to turn corn and hogs into money was conducted in connection with the agricultural class work of the boys in the Sylvester High School, commonly spoken of as McPhaul Institute."

"The boys at Sylvester began feeding a car load of hogs about January first. As the time to sell them approached they felt the necessity of making arrangements to dispose of them effectively. To this end they got in touch with the authorities of the Georgia State College of Agriculture and a co-operative hog sale was arranged in which the farmers of Worth County participated."

"Typical of the co-operative effort that has made Sylvester one of the most progressive communities in Georgia, the farmers brought in over five hundred head of hogs, which sold for more than \$7,000.00 in cash."

These examples are typical of the character and kind of work carried on by the teachers of vocational agriculture in the high schools of the state.

### CONSTRUCTIVE AGENCIES AT WORK IN GEORGIA

It is gratifying to be able to report that there are a number of constructive agencies at work in Georgia helping revamp the agriculture of the state and to orient it along lines which will be productive of the most good. There has been a veritable renaissance along dairy lines. The boll weevil is responsible in large measure for the changes which have been wrought in this direction. At the same time the dairy cow is coming into her own and the dairy business is winning a substantial place in the affections of our people from which it will not be readily dislodged.



### **Creameries and Cheese Factories**

Within the year twelve creameries and two additional cheese factories have been organized in the state. The one at Ashburn, starting in September without a clientele, is now manufacturing about 50,000 pounds of butter a month. It represents a new industry, developed, as it were, over night by the emergency conditions which prevailed in that section of the state. It is a monument to the energy, enthusiasm and fine spirit of leadership which the citizens of that community have displayed.

Up to the present time the products of our creameries and cheese factories have been satisfactorily disposed of within the state, and there is every reason to believe that it will take years of development work before we completely satisfy our local needs.

According to the census of 1919, Georgia was credited with selling only \$5,435,372.00 worth of dairy products. Our neighboring state of Alabama, which developed a dairy industry consequent upon the invasion of the boll weevil, was credited with making \$65,000,000.00 worth of dairy products. We have a larger local market than Alabama to begin with, and there is no reason why we should not ship dairy foods to other states.

This is an industry which the boll weevil cannot minimize or destroy. It promises to add millions of dollars to the revenues of our farmers and to furnish our towns and cities and the boys and girls living in the open country with a supply of milk and butter which has hitherto been lacking. As this milk and butter contains vitamins, the most liberal use of these articles in our dietary is of the utmost importance for maintaining the high physical prowess of the youth of our state.

### **Poultry Products**

The poultry industry has taken on new life. In many communities it has been found that egg circles could be organized and a superior quality of poultry products shipped acceptably to distant markets. A considerable quantity of Georgia eggs has been marketed at profitable prices in New York. White eggs from the College Poultry Division won fourth place in the New Jersey egg contest, and brown eggs won second place in the Indiana contest.

We are importing \$20,000,000.00 worth of poultry products each year. The city of Atlanta, for instance, is chiefly supplied from Tennessee. We have a home market at our command which we cannot supply satisfactorily without probably trebling or even quadrupling our present poultry industry. As chickens and eggs furnish the most desirable food with which the family can be supplied and provide essential articles of the dietary in the cheapest form, this business should be immediately developed on a basis commensurate with our needs.

The investment required is small, but skillful management and

handling of the flock alone make this business profitable. The youth of Georgia believe that there is a great future ahead along these lines. This is evidenced by the large number of young men and women who are specializing along poultry husbandry lines.

### Swine Industry

The swine industry in Georgia has been a saving grace in the past and promises to be more and more important in the future. We are still credited with importing \$50,000,000.00 worth of animal foods into the state. A large percentage of this consists of pork and pork products. With millions of idle acres in our state why should we permit this condition to continue? We have many unprofitable animals on our farms still because they are of the razor-back type, but the purebred sire will enable us to eliminate these.

The pig club boys have shown what can be done in thousands of communities along these lines. Let us emulate their examples. We need to grow a larger number of hogs. If we raise the cereals needed this end can be attained, even if we do not finish hogs which will yield as hard a type of pork as those fed out in other states. We can still grow them at a relatively lower cost because of our ability to raise them on grazing crops supplemented with a minimum grain ration.

The fine spirit evidenced by the Swine Growers' Association in organizing co-operative hog sales has given this industry a forward momentum that is most gratifying to observe. The fact that these sales are being held in various parts of the state is to be commended. By this arrangement an educational propaganda is being carried on most successfully.

Not only are the people being educated as to the merits of the purebred sire, but they have a chance to observe the grading, handling, selling and shipment of the hogs fattened in their community and thus gain a first-hand experience and knowledge that is very helpful. Through the medium of the sales held by this Association better prices have been secured for the growers throughout the state. It has been a pleasure for this institution to be permitted to co-operate in every possible way with the keen-sighted, forward-looking business men who are promoting the affairs of the Georgia Swine Growers' Association so successfully at this time.

### Alfalfa

Of the crops which promise to aid our farmers materially in overcoming boll weevil damage, there is none deserving more consideration and attention at this time than alfalfa. We have thirty-six acres of it growing on the College farm. The first plantings were made in 1912, and there are areas which have been cut regularly since 1913. An average yield of five cuttings per year has been obtained. The yield one season with another has never fallen below three and a half tons per acre, with an average of approxi-

mately four tons. Alfalfa hay has not within our knowledge sold locally for less than \$30.00 a ton, so that in the very poorest years the gross return per acre has been approximately \$100.00 or more.

Alfalfa is rather difficult to establish, and appears to be best adapted to the heavy red lands which predominate in north Georgia. Failure will sometimes be experienced in securing a stand, but where one succeeds the cost, which varies from \$20.00 to \$30.00 an acre depending upon seasonal conditions, sinks into insignificance. Some of our acreage has already been producing for nine years and is still in good condition. A gross yield of more than thirty-six tons per acre in this period of time shows the remarkable possibilities of this crop.

According to the last census there were only 2,735 acres of alfalfa under cultivation in Georgia. How has it happened that this gold mine has been overlooked so long? The latent possibilities of alfalfa for service to our people are almost unlimited. There should be an area of it on every farm. A ton of it approximates in feeding value a ton of wheat bran. We may use alfalfa to largely replace concentrates in our dairy and livestock production program. Let us capitalize this crop and plant it on a basis which our natural conditions justify, and which the experience of this institution fully warrants as essential.

### **Farm Management**

We are making some progress along the lines of developing Farm Management into a basic science. This subject deals with the farm as a whole. It is the co-ordination of all the best information about crops and livestock into sound, practical farming systems.

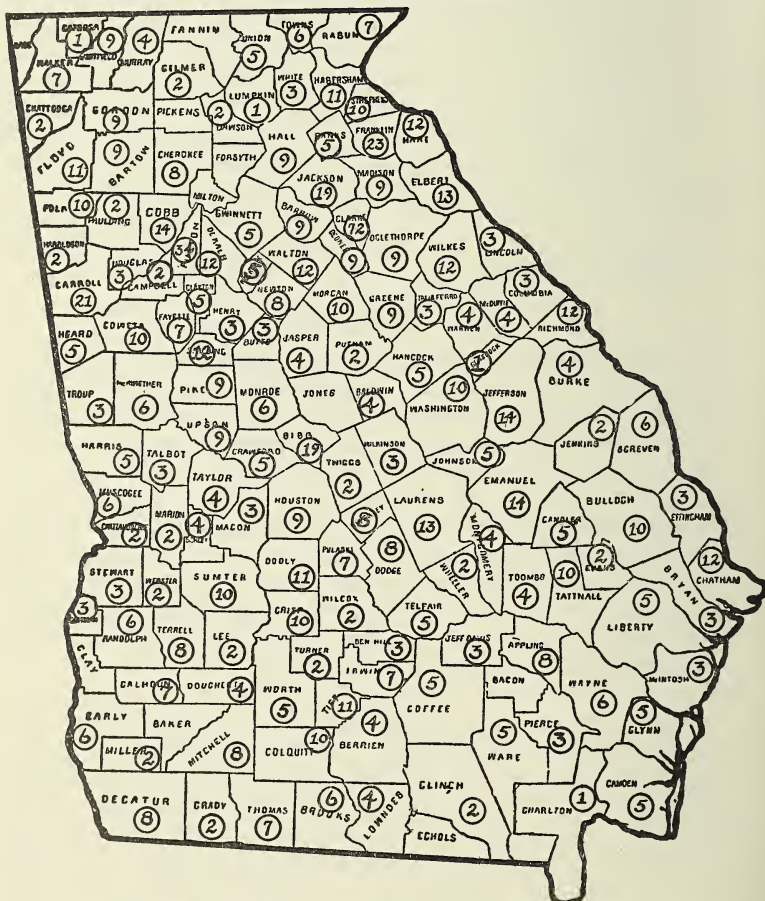
At present the agriculture of Georgia is in a state of flux. No prophet is wise enough to see what will be the outcome of the transformation through which we are now passing. But the studies of our farm management section on the cost of producing crops will serve as guide posts, pointing the way to a greater prosperity for the farmers of Georgia. These studies show how many leaks and sources of loss can be eliminated and the profitable crops separated from the unprofitable ones.

The time will never come again when the old free and easy methods of haphazard cropping can be followed. Intensive production must be the slogan from this time forward. More attention must be paid to the efficient use of labor and machinery, the inter-relationship of crops and the economic handling of livestock. All of this calls for the organization of the farm on a sound business basis, founded on the study of accurate farm records. It is thus easy to see that farm management is destined to become an ever-increasing factor in determining the success which shall attach to our farm operations in the future.

The farm management section needs strengthening to enable it to cope with the many problems that press for solution. Clerical help is greatly needed for tabulating and correlating the large amount of data that has been assembled. If clerical assistance were available much more effective use could be made of such sources of information as the U. S. Census reports, crop estimates, price data from the Bureau of Labor, and other statistical data relating to the economics of agriculture.

### ATTENDANCE

There were 1099 students in attendance during the year. Of this number 141 were women. Six hundred sixty-three were enrolled in the long courses and 449 in the short courses. The short



One hundred and forty-eight counties were represented at the Georgia State College of Agriculture in the session 1921-1922. The figures in the map show the number from each county.



course figures do not include those in attendance upon Farmers' Week or the Summer School. These students came from 148 counties. The College is thus reaching and serving every part of the state. Approximately 350 of them were studying for degrees.

The enrollment speaks for itself. It has brought about a congestion of our class rooms and laboratories which is most unfortunate. We have an insufficient number of teachers to deal satisfactorily with our student body. These conditions can only be remedied by a liberal increase in the maintenance fund whereby more teachers can be employed. There must also be a substantial extension of our buildings and equipment so that sufficient room and facilities may be made available to maintain the highest and most efficient standards of instruction. Surely it is worth while to take care of the educational needs of our basic industry, for even in these times of great depression the farmers of Georgia are adding more new wealth to the income of the state than is derived from any other source.

Though the prices of farm products are at the lowest ebb known in many years, the gross income from our farms in 1921 approximated \$250,000,000.00. Five cents per capita of our population would about double the income of the College and provide funds for the essential developments which must be made. Surely no one would object to contributing the price of a single soft drink to so worthy a cause.

#### Growth in Attendance

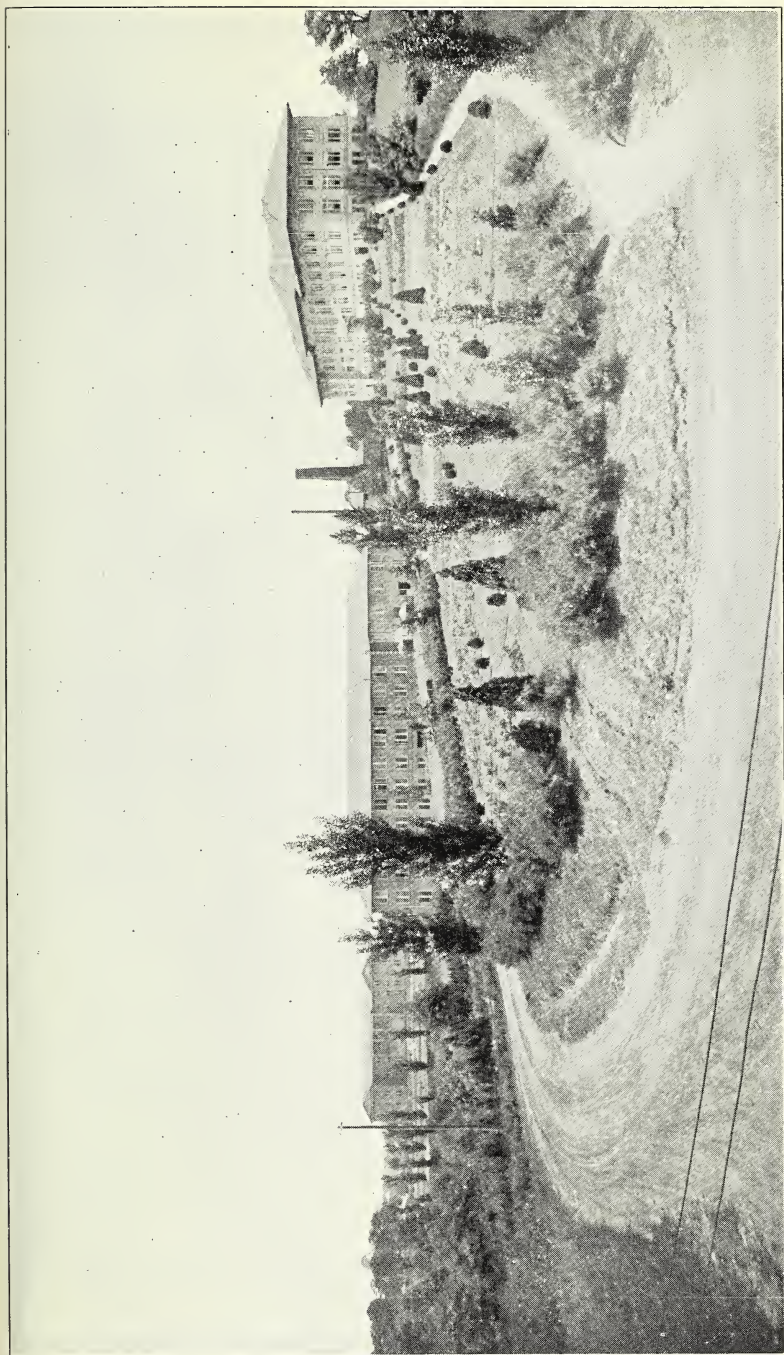
Year	Long Courses	Short Courses	Total
1908	67	104	171
1909	62	124	186
1910	98	100	198
1911	115	110	225
1912	161	66	227
1913	185	165	350
1914	182	284	466
1915	191	350	541
1916	200	219	419
1917	209	543	752
1918	166	638	804
1919	287	813	1,100
1920	529	518	1,047
1921	586	592	1,178
1922	663	449	1,112
Total	3,701	5,075	8,776

#### Summary of Registration

##### Long Courses

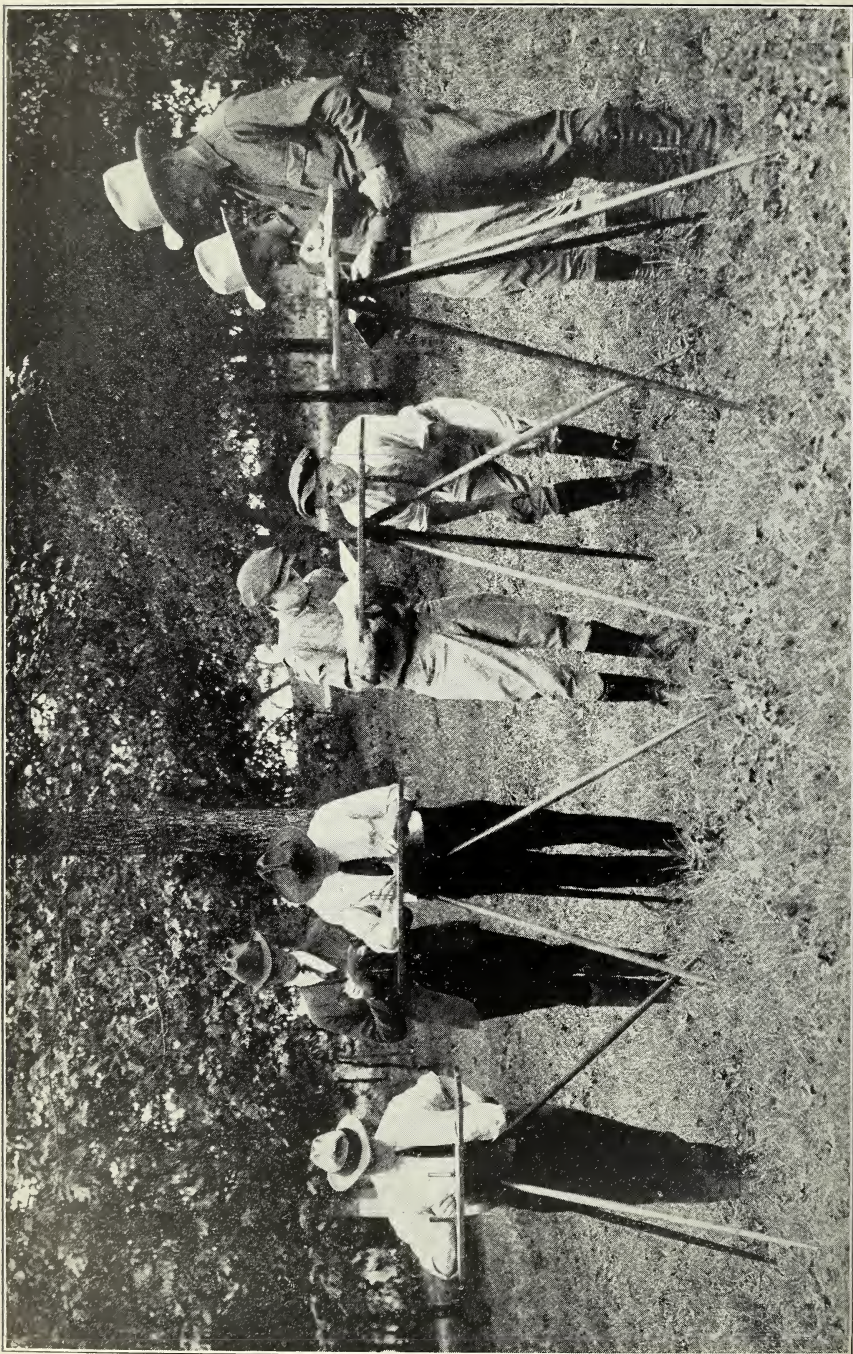
Master of Science in Agriculture	10
Bachelor of Science in Agriculture	195
Doctor of Veterinary Medicine	18
Bachelor of Science in Home Economics	39
One-Year Course	5





*View of the Woman's Building (left), Agricultural Engineering Building (center), and Administration Building (right) from the Veterinary Hospital.*







## COURSES OF INSTRUCTION

There are two general misapprehensions existing relative to the work of this institution which should be corrected. There is still an impression in many quarters that the courses are extremely narrow and deal only with those phases of work related to soils, crops and animals. The term agriculture, to the great majority of people, has only the narrowest significance. The broad, comprehensive nature of the term seems to have escaped their attention. There are few subjects of so all-embracing a character, as a little study and investigation will reveal.

Agriculture is the oldest of the arts and, relatively speaking, the least developed of the sciences. It has afforded a means by which some sort of a living could be scraped from the soil through the generous kindness of an all-wise Providence. Because it has not been essential on the part of the majority of those who engage in it to possess the highest degree of intelligence it has been considered by many to be a shallow, narrow-horized subject. It is only recently that we have begun to sense the possibilities of developing it into a broad cultural subject and professionalizing it as thoroughly and completely as any of the so-called humanitarian subjects.

We are just now beginning to suspect how fundamental a generous knowledge and application of scientific truths to the cultivation of the soil, the crops produced thereon, and the animals maintained through the agencies of these crops, has become to world progress and development. This institution has striven from its inception to place agricultural education on the pedestal where it properly belongs, and to enlarge and broaden its courses so that they should provide for a happy combination of cultural values, broad scholarship, and efficient training in the fundamental arts and sciences upon which successful agricultural practice depends.

Much progress has been made and students may now specialize in a great variety of subjects. On the other hand, there are at least ten or twelve phases of instruction which have been overlooked and neglected. They are of the greatest economic importance to the welfare and progress of this state, and it is greatly to be regretted that a maintenance fund of sufficient size has not been provided to enable the establishment of these courses on a basis commensurate with our needs.

## REHABILITATION STUDENTS

The College is privileged through the co-operation of the Federal Board for Vocational Education to participate in the retraining of a large number of men. The same standard entrance requirements of 15 units are required of these men as well as of all other students entering the regular college courses. The ma-

jority of our rehabilitation students are taking general training in agriculture, although many are specializing in agronomy, horticulture, poultry husbandry, agricultural engineering, animal husbandry and forestry. No opportunity which has come to the institution has been more generally appreciated than that of serving these men.

The number of Rehabilitation students has grown steadily, and special class rooms are being arranged for their use next year. This institution has been requested to supervise the project training, and Mr. M. W. H. Collins has been appointed to look after this work. Twenty-four men are at present on project training. In addition to Mr. Collins' visits, semi-monthly mimeographed sheets, bearing on their work, are sent to these men, who seem to appreciate them very much. The District Manager of the United States Veterans' Bureau requested a number of these sheets to send to other states. The office of the Bureau in Atlanta also secured the account books, which are used by this institution, for the work in other states.

It has been possible to reorganize the Rehabilitation work somewhat in the past year and to arrange more definitely for the job objectives. All the courses below college grade have been put on a two-year basis. As a general proposition, one year of preliminary training is given and one year of rather intensive training along the lines of the job objectives.

Considerable progress has been made this year in getting equipment for training these men. The addition to the Poultry Plant has increased very materially the facilities for giving the instruction in Poultry Husbandry. The poultry work seems to be especially fitted for the disability of a great many of the Rehabilitation students, and even larger numbers will probably select it.

The lay inspector work, started last September, did not at first meet with the favor that was anticipated. A recent interview with the authorities in Atlanta, however, seems to have put it on a better basis, and a larger number of men will doubtless enroll for this work next year.

### HOUSING FACILITIES

As pointed out in previous reports, the growth of the institution is seriously hampered by reason of the fact that we have been unable to provide satisfactory living quarters for many of our students. There are now several thousand high school graduates in Georgia each year. A representative percentage of them desire to come to this institution. Many of them are poor boys and girls. They have very limited financial resources at their command. Nevertheless they are possessed of the keenest and brightest minds. If educated they would represent an asset of great value to the state.

Surely it would be well worth while to provide a dormitory for the young men in particular. The sum which it would be necessary for the state to invest sinks into insignificance as compared with the benefits to be derived from an investment of this character. If education is a thing to be prized to the extent indicated by the expression of our public men and by the actions of our sister commonwealths, surely we should hasten to provide technical and vocational institutions of this kind with the necessary facilities and equipment which would enable them to satisfactorily care for the needs of the men and women who desire to specialize therein.

A dormitory costing say \$250,000.00 would represent a permanent investment covering a period of fifty to a hundred years, and would provide residence during that time for several thousand of the most vigorous-minded young men in the state.

### STUDENT WELFARE

All activities of a helpful nature to students have been encouraged as generously as possible during the year. Excellent service work has been done by the Y. M. C. A. and Y. W. C. A. The high religious and moral tone evidenced by our student body is worthy of commendation. The usual fine spirit of co-operation has been extended the administrative office.

The Student Council has functioned satisfactorily during the year, and the honor system has been efficiently maintained. Student organizations of every kind have developed and prospered. Public meetings were held under the agency of the Horticultural Club, and the "Little International" Livestock Show, put on by the Saddle and Sirloin Club, was a distinctive feature of the year's work in animal husbandry.

Among the other organizations which have done fine work throughout the year are the following:

The Alpha Zeta, which is our honorary fraternity for men.

The Alpha Mu, which is our honorary fraternity for women specializing in home economics.

The Agricultural Club, which is the literary society of the students. It has conducted a number of debates and had a very successful year generally.

The Homecon is a club for women corresponding to the Agricultural Club.

The Zodiac Club is a literary society in which the women students participate.

The Aghon Club is an honorary society, the members of which are selected on the basis of having shown excellence in the fields of debating, stock judging, and athletics.

The students undergoing re-training have organized the Rehabilitation Club.

There is also a Veterinary Club, a Forestry Club, a Horticultural Club, and an Agronomy Club.

A number of entertainments have been given during the year for the benefit of our student body. These occasions were largely patronized and served an effective purpose in bringing the staff and the students together in a social way. The spirit of co-operative unison which exists between the staff and the student body is of a happy and felicitous nature and constitutes one of our greatest assets.

Much more needs to be done for the physical and social life of our students. This cannot be accomplished with our present facilities. We need a large hall on the campus to be used for social life purposes. A failure to instruct and develop the students along social life and welfare lines is a grievous mistake and has proved to be a severe handicap to many a college graduate in later life. Developing that phase of the student's nature is a more important undertaking than most of us recognize. It should at the very least be placed on a parity with class room instruction, because it develops phases of the character and creates an interest and undertaking of human nature which is essential to the growth and development of the student along public service lines.

### ACTIVITIES OF OUR GRADUATES

The total number of graduates since 1908, inclusive of the class of 1922, is 268. Of this number thirty-one are women. There are forty-nine men and women in the present Senior class. The following is a record of what our alumni are doing. This statement was prepared by Prof. R. R. Childs. It shows that practically all of our graduates are engaged in constructive service work as it relates to agriculture and home economics. It is interesting to observe what a very considerable proportion of them are actually engaged in farming. This list gives some idea of the variety of service work for which our students are prepared, and shows how thoroughly well they have functioned since graduation.

#### What Our Graduates Are Doing

College teaching and administrative work-----	20	
Teaching in high schools-----	29	
College extension -----	17	
Government, Department of Agriculture-----	2	
County Agents -----	17	
Farming -----	47	
Experiment station work-----	4	
Agricultural Agents, Corporations-----	3	
Business closely allied to Agriculture-----	13	
Business not related to agriculture-----	17	
Forest Engineers -----	3	
Veterinarians -----	5	
Students -----	5	
Deceased -----	5	
Occupation unknown -----	10	197



Farming in connection with other work-----	16	
<b>Home Economics</b>		
Teaching in College-----	1	
Teaching in High Schools-----	11	
Extension work and district agents-----	7	
County Home Demonstration Agents-----	1	
Other work -----	2	22
	<hr/>	<hr/>
Total -----		219

### DISTRICT AGRICULTURAL SCHOOLS

The thirteenth annual meeting of the principals of the District Agricultural Schools was held in my office at 10 o'clock on Friday, April 28th. All the schools, except the Ninth District, were represented by the Principal or a member of the staff designated for that purpose. A large number of routine matters were taken up and disposed of satisfactorily. Rules covering eligibility for stock judging contests were agreed upon.

The schools adopted the system used by the state for keeping records of students in the high schools. Action was taken looking to the establishment of a teacher-training course in all these institutions on the basis suggested in the State System of Certification. Plans were considered and discussed whereby the efficiency of the schools in serving the needs of their communities might be greatly increased.

The desirability of bringing the institutions more closely in touch with the constituency they serve was stressed, and ways and means were pointed out by which the attendance might be increased acceptably in a number of the schools where the enrollment has not been as large as usual.

Chancellor Barrow commended the schools for what they had done and expressed his gratification over the harmonious relationships which now exist between the schools and the State College of Agriculture. He also expressed the hope and belief that these schools would develop into strongholds of applied education in their various communities.

Certain changes in the course in home economics appear to be desirable, and Miss Creswell was asked to have plans prepared and make recommendations relative to this matter.

Announcement was made relative to Vocational Week, which is to be held at the College of Agriculture beginning July 10th.

When everything is taken into consideration, the schools have enjoyed a fairly satisfactory year. Several of them have made a remarkable showing in the matter of student attendance and the nature of the work accomplished. The standards set up have been fairly well maintained by most of these institutions, and a careful inquiry will reveal the fact that they have performed a far greater service work for the communities in which they are located than most people realize.

It is gratifying to find that such a considerable percentage of the boys and girls who graduate from these institutions return to the farm, and there is evidence of the benefits of the leadership which they are effecting in the several communities from which they come. A fair percentage of the graduates are attending institutions of higher learning and preparing themselves for the most acceptable type of leadership.

In spite of the handicaps and difficulties with which many of these institutions have had to contend they are making progress in the right direction, and a united community support and more generous appreciation of them would undoubtedly redound greatly to their good and at the same time materially increase their efficiency.

The district vocational and athletic contests were held at the College on April 28th and 29th of this year. Representatives of eight schools participated in the contests, and the number of boys and girls engaging therein was eighty-four. The heavy rains which fell Friday and Saturday prevented the establishment of any new records in the track events, but all the other contests were carried off with the usual enthusiasm and success.

The grand prize and also the literary and industrial banners were won by the Fifth District A. & M. School at Monroe. The athletic banner was won by the Second District A. & M. School at Tifton. Gold medals bearing the seal of the University were awarded the winners of the various events as in previous years. The money for these prizes was given by the Virginia-Carolina Chemical Company.

## VISITORS

An ever-increasing number of persons continue to visit the College. They are representatives of every section of Georgia and come not only as individuals, but as committees sent by various farm and other organizations for the purpose of making an official inspection of our plant and farm. The idea is to ascertain what methods of practice may be in vogue here that are likely to be of service to the communities thus represented. In every instance the visitors have commended the work we are doing, and the universal sentiment expressed has been to the effect that the state should support our work more liberally.

Many of our visitors also come from other states. A considerable number have been sent to see us by the governmental authorities in Washington. They have been pleased to indicate that ours was a thoroughly representative institution of its type and organized and maintained on efficient lines. Every effort has been made to insure our visitors' securing the information desired, and to afford them opportunities for inspecting the plant. This takes a good deal of time and calls for the exercise of a good deal of

patience on the part of our staff of instructors, but we believe it's time well spent.

### SUMMER SCHOOL

The usual summer school courses will be offered from June 26th to August 5th. Courses in vocational agriculture and home economics to the number of seventeen are open to students this year. These courses are all of college credit rank. Where as many as five students make application for college credit work in chemistry, animal husbandry, agronomy, horticulture, veterinary medicine, or any other standard course offered in this institution, arrangements can be made through the head of the division to secure the instruction desired.

It is possible, through the medium of the summer school, for students who are unusually bright to complete the greater part of their work leading to the degree of B. S. in Agriculture or B. S. in Home Economics in three years. By this plan students can save a considerable amount of time and expense, and every effort is being made by the institution to keep its plant in operation for eleven months of the year.

A special Vocational Week has been provided for during the Summer School. The subjects to be discussed are: marketing farm products, poultry husbandry, and the organization of vocational courses. Any teachers now engaged in the schools are expected to be present and participate in the review work for which provision has thus been made. The maintenance of these courses has been made possible through the co-operative agreement entered into with the State and Federal Boards for Vocational Education. We appreciate the fine spirit of co-operation which we have received from these organizations.

### COTTON GRADING SCHOOL

The usual cotton grading course will be offered from July 3rd to August 5th. The losses which have accrued to the farmer through the unnecessary admixture of grades and from carelessness in handling his cotton after it has been harvested, are more or less familiar to all. The fact that most of these losses may be avoided through the exercise of a little skill and patience is also generally appreciated by those who have had experience in the handling of cotton.

It is the intention and purpose of the cotton grading school to inform the largest possible number of growers and handlers of cotton relative to these matters, so that unnecessary losses may be avoided and a more uniform type of cotton offered to the manufacturer at prices which will insure the grower a larger return for his efforts than he has hitherto received.

There is another matter which is being emphasized through the agency of these courses. It is the fact that a very considerable

percentage of the cotton now grown will not staple seven-eighths of an inch. When it becomes shorter than this it is of necessity greatly discriminated against on the markets because it cannot be handled and spun satisfactorily.

A considerable number of manufacturing concerns which have made no particular difference in the price of cotton in proportion to the length of staple, now find that goods made from that under seven-eighths of an inch in length do not meet the tests which the purchasers of yarn have established. The mills are therefore beginning to consider the desirability of differentiating in the prices paid for cotton according to the length of staple offered.

On the other hand, it is a waste of energy on the part of the farmer to grow a variety of cotton which does not possess a staple of at least an inch. The reason for this lies in the fact that he can grow varieties which are thoroughly acceptable to the trade and which will insure his securing a larger return than he now obtains for his lint cotton, and a larger gross income per acre than he has received for many of the varieties he has hitherto been cultivating. These and many other facts of fundamental importance to the cotton industry of the state are discussed and elaborated on through the agency of the cotton grading school. It is thus being made a factor of constructive value to our farmers and our manufacturers.

### BOYS' CLUB WORK

Georgia was a pioneer state in taking up boys' club work in a systematic manner. Corn was emphasized for the first few years with success. Interest was aroused in all the counties and the methods of increasing the yield by using the right variety, making the proper preparation, fertilizing judiciously and cultivating in the proper way, as advocated by the College and Experiment Station, were put into practice.

Some of the results from this work were (1) an increase in the acreage planted to corn by about two million acres, (2) a raise in the average yield from ten to fifteen bushels per acre, thereby increasing the total production from thirty-nine million bushels to practically twice this amount. Systematic club work is now being carried on with all the other principal field crops and splendid results have been obtained.

A decided impetus was given swine production in Georgia when the pig clubs were organized. The fundamentals of a more economical method of production have been emphasized through better breeding, feeding, care and management. The satisfied grunt of the purebred can today be heard on thousands of Georgia farms where ten years ago the razor-back reigned supreme. That the boys are growing more and better hogs is not the result of ac-



cident. Since the pig club work started, type has been stressed through judging contests in the counties and at the fairs.

Three years ago Frank Bennett of Conyers, Georgia, was enrolled as a member of the Rockdale County Pig Club through the efforts of his county agent. He knew practically nothing about hogs but was willing to learn. Last fall at the Southeastern Fair in Atlanta he made the second highest score in judging twelve rings of livestock consisting of the following: Hereford, Shorthorn, Aberdeen-Angus, Jersey, Holstein, and Guernsey cattle; Duroc, Poland-China, Hampshire, and Berkshire hogs, and Southdown and Shropshire sheep.

Teams from seventeen states were competing in these contests, several of which were from northern and western states, where livestock is grown extensively.

There are a number of students in the College now who began their agricultural education as club members and are defraying their expenses from their club activities.

Club members are beginning to market their products co-operatively. Co-operative pig club sales have been numerous this year, examples of which might be mentioned, those held in Meriwether, Monroe and Laurens Counties. The Meriwether sale consisted of sixty-four number one's and nine number two's, which brought \$1,292.98. This lot of hogs, according to Prof. M. C. Gay, who graded them, was one of the best that he had seen in Georgia in several years. They brought an average of about one cent per pound above the average market price for these grades on that day.

When it is remembered that 130,283 boys have been members of club work in Georgia since 1910 and given specific assistance in growing products valued at \$5,802,001.00 the tremendous significance and possibilities of this type of practical instruction can be realized.

### THE STAFF

Comparatively few resignations have been recorded during the year. Most of the positions vacated have been satisfactorily filled by our own graduates. The fine esprit de corps which has characterized the staff in the past has never been better exemplified than during the year now closing. Excellent service has been rendered by all our instructors. They have taken an unusual interest in the welfare of the students, and a pride in the work of their divisions and in the institution as a whole.

They have distinctly impressed the student body and I think made a very favorable impression on the state as well. The work of many of our heads of divisions, and some of our other instructors as well, has received well merited recognition outside of the state. The staff continues to grow in purposeful service work and in efficiency as well. The efforts of the various divisions have been

well co-ordinated and a spirit of co-operation and unity pervades the work of the institution.

It is a pleasure to be afforded an opportunity to bear tribute to the fine character of work being done by the staff as a whole, and to express the hope that the merit of their work will be more generally appreciated and rewarded by the state. It is hardly necessary to point out in this connection that many of our professors are now working for salaries lower than those paid in other states, and that our financial conditions has been such as to prevent their promotion on the basis provided for in the University regulations. We cannot always expect to retain the services of so competent and experienced a body of instructors unless more adequate recognition is afforded them in a financial way.

### RESIGNATIONS

Neal D. Peacock, Associate Professor of Horticulture.  
Henry N. Kaldahl, Associate Professor of Animal Husbandry.  
Lewis H. Wright, Associate Professor of Veterinary Medicine.  
Wilbur F. Rue, Field Agent in Poultry Husbandry.  
Alfred H. Meyer, Soil Expert in State Survey.  
Francis Vaughan, Adjunct Professor of Farm Crops.  
Charles G. Garner, Field Agent in Marketing.  
Thomas N. Bussey, Field Agent in Horticulture.  
Albert D. McGrew, Adjunct Professor of Forestry.  
Alfred M. Thornton, Editor.

### APPOINTMENTS

Robert Wallace Jones, D.V.M., Kansas City Veterinary College, Associate Professor of Veterinary Medicine.  
Julius Mitchell Elrod, B.S.A., University of Georgia, Associate Professor of Agronomy.  
Robert Murray Soule, B.S.A., University of Georgia, Associate Professor of Agricultural Chemistry.  
Wade Hampton Rice, B.S.A., University of North Carolina, Adjunct Professor of Poultry Husbandry.  
Waldo Silas Rice, B.S.A., University of Nebraska, Adjunct Professor of Animal Husbandry.  
Rufus Lafayette Keener, B.S.A., University of Georgia, Adjunct Professor of Horticulture.  
John Estes Everett, B.S.A., University of Georgia, Adjunct Professor of Agricultural Engineering.  
DuPre Barrett, B.S.F., University of Georgia, Adjunct Professor of Forestry.  
Harold Leon Harrington, B.S., Massachusetts Agricultural College, Adjunct Professor of Horticulture.  
Lewis R. Smith, B.S., Pennsylvania State College, Adjunct Professor of Forestry.

Edith V. Creswell, B.S.H.E., University of Georgia, Instructor in Home Economics.

Morris William H. Collins, B.S.A., University of Georgia, Supervisor Rehabilitation Projects.

Mrs. M. W. Lowry, Instructor Rehabilitation Section.

### STATUS OF COUNTY AGENT WORK

There has been much agitation in the public mind lately relative to the legal status of the county agent work in Georgia. A recent decision of the supreme court clears away much of the misunderstanding which has appertained relative to this matter. It appears that at most the passage of a simple enabling act by the legislature will clarify the whole situation and permit the county authorities to appropriate such funds as they may see proper for the support and maintenance of the work of the county agents.

In spite of the handicap which naturally might have been expected to come from the effect of the Supreme Court decision upon the various county boards co-operating with us to maintain these agents, we are glad to state that up to date there has been no loss in counties or in the number of agents employed. This shows that the people have confidence in the work and wish it continued.

In addition to the decision of the learned Supreme Court Justice, at least two of the learned Superior Court Judges have held that the work is educational of the highest type, and as such can and should be worked in connection with and very closely affiliated with the school system. Judge H. A. Matthews, of the Macon Circuit, says:

"Where provision has been just made, I think the County School Commissioners have authority, under the provision of Section 108 of the Acts of 1919 (Acts 1919, Page 331), to employ teachers for agricultural subjects and for domestic science, and that they had that authority immediately upon making the provision for the levy of the county educational tax. Prior to making such provision, that is, prior to August 2nd, 1921, I do not think the Board of Education had such power. The Act of 1919, just cited, seems to be the source of power to include in the subjects taught in the public schools, agriculture, home economics, et cetera, and confine such teachings to those counties where there is a local taxation for educational purposes."

Judge Andrew J. Cobb, who has been both on the Supreme Court and Superior Court bench, says also:

"It is settled by this case that the county agent is engaged in educational work. Education for a given class, those from six to eighteen years of age, is provided for by the public school system. The law declares in mandatory terms that the elementary principles of agriculture shall be taught in the public schools. County Superintendents are required to report to the State Super-

intendent any failure on the part of the County Board of Education to comply with this requirement. (Code of Georgia 1910, Sections 1464-1465).

"Why may not the County Board of Education make the County Agent an instructor in its schools to teach that which the Legislature commands to be taught? If they can so employ him, they may lawfully pay him out of funds under their control to be expended for educational purposes. Judge Matthews of the Macon Circuit has already ruled that this can be done. If, as an incident of the compliance on the part of a county Board of Education with its duty to teach agriculture to those of school age, those who are not of school age are benefited either by class room or practical demonstrations in the field, this would not destroy the power to do that which the Board is commanded to do."

I also take the liberty of quoting from a letter received from Hon. George M. Napier, Attorney General, dated March 18, 1922, giving his opinion on certain questions asked him:

"You ask (1) Can County Commissioners or ordinaries pay the county's part of the county agent's salary out of fines, fees or forfeitures? (2) Could they pay him as supervisor of the county farm, making it a demonstration farm? (3) May the Board of Education employ agents as instructors in agriculture and home economics, or as Assistant to the County Superintendent of Education, or as Supervisor of these subjects in the common schools of the counties? (4) In case the Board of Education does not have sufficient funds in hand at this time, may such Board request emergency educational funds from the County Commissioners for this purpose?

"In my opinion: (1) Yes, County authorities may legally contribute to the payment of such salary out of any funds of the county, not raised or set aside for a special purpose, which funds have not arisen from taxation. (Provided that by special Act of the Legislature any county might raise money to be expended for the salary of a county agent.)

"(2) By making the county farm a demonstration and experiment farm, for educational purposes, and by arranging for pupils of the common schools to attend the agricultural educational instruction and demonstration to be afforded, the county authorities (the Ordinary, or Commissioners, as the case might be) would be authorized to employ a County Agent and pay his salary.

"(3) I can find no lawful obstacle nor objection to their doing so.

"(4) There is no provision for the lending of money by the County Commissioners to the Board of Education. The assistance to be rendered by the Commissioners to the County Board of Education would be restricted to the amount of funds available under the preceding sections hereof."

From the decision of these learned jurists there can be no doubt



as to the importance of the work in which these agents are engaged. This is further borne out by the results being obtained as well as by the attitude of the people to retain their services under these conditions and in these times of financial depression.

It is clearly evident that any work considered so valuable by both people and jurists as is the work of the county agricultural and home demonstration agents should not be handicapped by any doubt as to the legality of its local support. For this reason, it is greatly desired that the next legislature may enact such measures as will remove all hindrances of this nature so that the work may go forward to render even greater service to the agricultural interests of our state.

### PRIZES, SCHOLARSHIPS AND GIFTS

Our friends have borne our needs in mind and contributed generously toward prizes, scholarships, and various of the general maintenance funds of the institution. Short course scholarships have been awarded through the agency of individuals, bankers, railroads, women's clubs, county boards of education, fair associations and kindred organizations to the extent of \$5,725.69. These funds have naturally been disbursed for the payment of the expenses of the boys and girls attending the annual short courses.

The Georgia Bankers' Association has established a trust fund to be loaned to students. It now amounts to \$5,499.89. Thirteen new beneficiaries were added during the year. This fund is distributed on a basis similar to that in effect with the Brown Fund. The Georgia Bankers' Association is to be commended for its generosity in this matter. Without their aid a considerable number of deserving students would of necessity have been denied the opportunity of securing an education.

A Canning Club scholarship trust fund aggregating \$868.14 has been established. There are two beneficiaries at the present time. These girls are nominated by the Home Economics Division and are entitled to borrow a certain proportion of this fund at four per cent interest. Repayments are to be made on the same terms as pertain to the Brown Fund.

The William Wilson Findley Foundation fund is used to maintain one beneficiary. It represents the gift of the Southern Railway Company for the purpose of perpetuating the memory of its former president. Four women are now receiving loans through the agency of the Student Aid Foundation. The Soil Improvement Committee of the Southern Fertilizer Association has given a prize of \$100.00 to the Senior making the best record in his studies and who desires to pursue post-graduate work.

The continuance of the pasture work has been insured by a gift of \$1000.00 from Swift & Company.

During the year, the following women's clubs have each con-

tributed \$125.00 or more for furnishing a room in the new Woman's Building, the total amount received being \$542.00: Dublin U. D. C.; Georgia Division U. D. C., honoring Allene Walker Harrold, State President; King's Daughters and Sons, honoring their President, Mrs. Claude W. Reeves; Executive Committee of the State Federation of Women's Clubs, honoring Miss Rosa Woodbury. Funds to the extent of \$3,287.00 have previously been received and acknowledged, for the purpose of furnishing thirty other rooms.

In addition to the above Clark County contributed \$3,600.00 to the extension funds.

The Animal Husbandry Division received medals and trophies for stock judging contests; and dairy equipment was loaned to the extent of \$900.00.

The Agronomy Division received the following gifts: Lummus & Company, gin, \$150.00; Southern Fertilizer Association, fertilizer, \$100.00; Potash Syndicate, fertilizer, \$50.00; Barrett & Company, fertilizer, \$75.00.

The Horticultural Division received gifts of fertilizer, trees and plants aggregating \$100.00; the Forestry Division a Camp site in Towns County; the Poultry Division an oil-burning brooder from the American Incubator Company, and a pen of fine Black Minorcas from Mr. Howard Scott.

The Agricultural Engineering Division has machinery on loan for educational purposes to the extent of \$5,768.00.

Grateful acknowledgment is made to all these friends, firms and organizations for the evidence of faith they exhibit in our work and the generous support they have accorded the same. Without their aid and co-operation many of our activities must of necessity have been greatly curtailed.

## DIVISION OF EXTENSION

The extension workers, with headquarters at the College, are shown on the inside cover of this report. A list of the district, special and county agents follows.

### DISTRICT AGENTS

Walter Scott Brown, B.S.A., Board of Trade	Savannah
James Augustus Johnson, B.S.A., Chamber of Commerce	Macon
Thomas Lynn Asbury, B.S.A., Board of Commerce	Augusta
Robert Fred Whelchel, B.S.A., Chamber of Commerce	Columbus
Mrs. Leila R. Mize, Chamber of Commerce	Atlanta
Etta Colclough, B.S.H.E., Board of Trade	Augusta
Mrs. Kate Lanier Smith, Box 924	Savannah
Rosa McGee, B.S.H.E., Chamber of Commerce	Macon

### SPECIAL AGENTS

Jefferson Irwin Davis, B.S.A.	Quitman
Brooks, Lowndes, Cook and Berrien Counties.	
Edward Penn McGee	Ludowici
Long, McIntosh, Liberty and Evans Counties.	

James Thomas Pittman-----Fitzgerald  
 Irwin, Wilcox, Tift and Worth Counties.  
 James R. Sealy, B.S.A.-----Arlington  
 Baker, Miller, Decatur and Seminole Counties.

### COUNTY AGRICULTURAL AGENTS

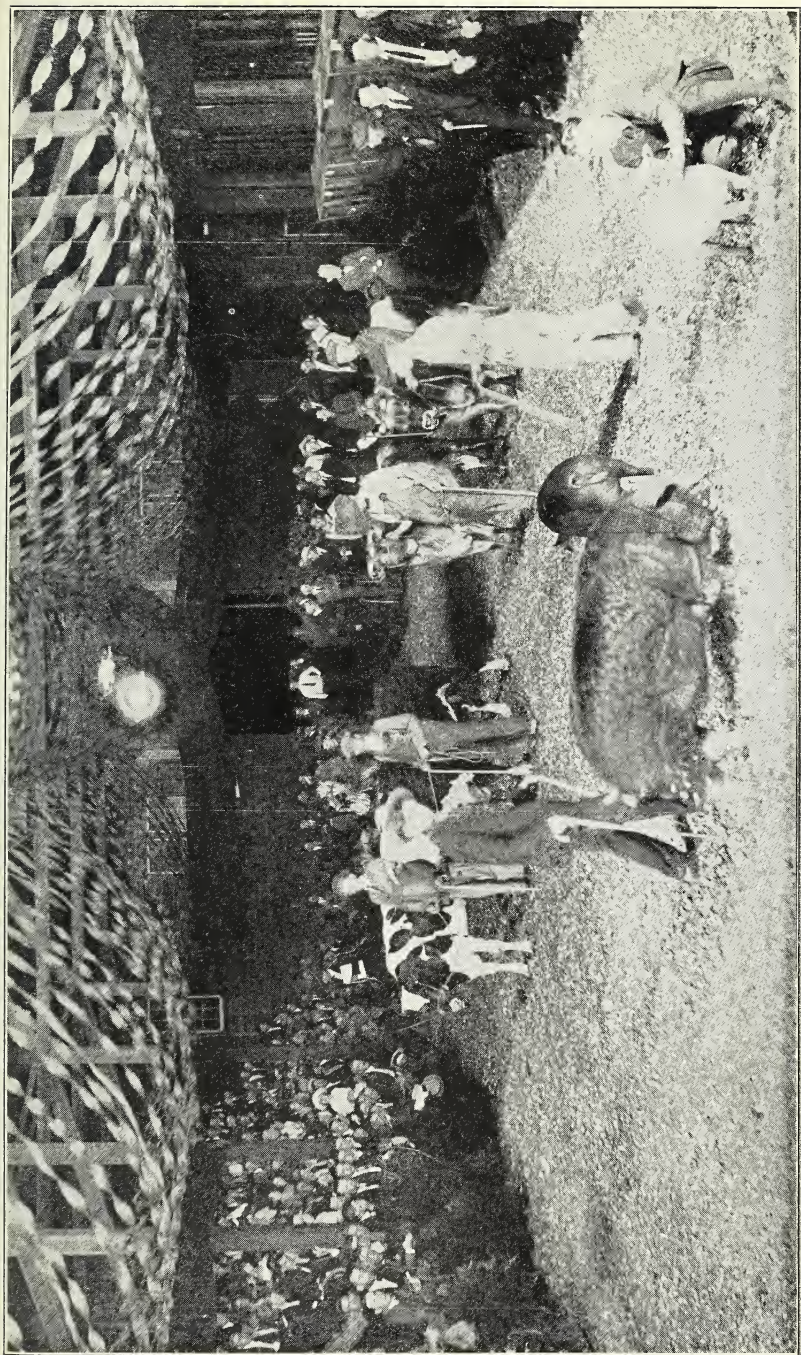
County	Name	Post Office
Bacon	L. C. Walker	Alma
Baldwin	Louis Edward Swain	Milledgeville
Bartow	Charles Holcomb Cox	Cartersville
Ben Hill	Charles T. Owens, B.S.	Fitzgerald
Bibb	William Green Middlebrooks	Macon
Calhoun	Albert Edgar Gibson, B.S.A.	Edison
Camden	William Ritchie Smith	St. Marys
Campbell	Fred Dudley Jeter	Fairburn
Candler	Homer Jackson Prance	Metter
Carroll	Edward Talbot Jackson	Carrollton
Chatham	Gratz Dent, B.S.M.E.	Savannah
Clarke	Jones Purcell, B.S.A.	Athens
Clay	Daniel Moore Treadwell	Ft. Gaines
Clinch	Hendricks Lafayette Cromartie	Homerville
Coffee	Dale E. Sawyer, D.V.M.	Douglas
Colquitt	Richard Anderson Stratford, B.S.A.	Moultrie
Columbia	Joseph McDuff Turner	Appling
Coweta	Benjamin M. Drake, A.B.	Turin
Crisp	Clarence Boozer Culpepper	Cordele
Dooley	Eben Corey Mann	Vienna
Dougherty	Ralph Bernard Reeves, B.S.	Albany
Early	Eugene Semore Collins	Blakely
Effingham	Dallas Spurlock	Springfield
Fannin	Alvin John Nitzschke, B.S.A.	Blue Ridge
Floyd	William Edgar Bowers, B.S.A.	Rome
Franklin	William Gladstone Owens, B.S.A.	Canon
Fulton	Harry Lowrance Brown, B.S.A.	Atlanta
Gordon	Reuben Lee Blackwell	Calhoun
Greene	Wade Hampton West	Greensboro
Gwinnett	Albert Gordon Robison	Lawrenceville
Haralson	Charles Allen Mize	Tallapoosa
Henry	Louis Irwin Skinner, B.S.A.	McDonough
Jackson	Willie Hill Hosch	Jefferson
Jasper	Mark Sanders Womack, B.S.A.	Monticello
Jefferson	Carlos Vivian Shirley	Louisville
Jeff Davis	Esten G. Cromartie	Hazelhurst
Johnson	Matthew Edmon Crow	Wrightsville
Lamar and Pike	Homer A. Cliett, B.S.A.	Barnesville
Laurens	James Force Hart, Jr., B.S.A.	Dublin
Lincoln	Edgar O. McMahan, B.S.A.	Lincolnton
Marion	Jesse Orville Pinkston	Buena Vista
Meriwether	Cecil Guy Neal, B.S.A.	Greenville
Monroe	Hubert Leonidas Worsham, B.S.A.	Forsyth
Montgomery	James Bedo Tyre	Mt. Vernon
Muscogee	Felix Lloyd Jenkins, B.S.A.	Columbus
Newton	James Karl Luck, B.S.A.	Covington
Oconee	Selina Devanie Truitt	Watkinsville
Polk	William Henry Garner	Rockmart
Fulaski and Bleckley	Luther S. Watson, B.S.A.	Hawkinsville
Rabun & Habersham	John Virgil Arrendale, B.S.A.	Clayton
Randolph	Joseph G. Woodruff, B.S.A.	Cuthbert
Richmond	Bright McConnell, M.S.A.	Augusta

Rockdale - - - - -	Charles Olin Smith-----	Conyers
Spalding - - - - -	William Tapley Bennett, B.S.A.-----	Griffin
Stewart & Webster - - - - -	Oscar D. Watson, B.S.A.-----	Richland
Sumter - - - - -	George O. Marshall, A.B.-----	Americus
Tattnall - - - - -	Archibald Boyd Hursey-----	Reidsville
Telfair - - - - -	W. Fred Whatley, B.S.A.-----	McRae
Terrell and Lee - - - - -	William Jackson Boyette, B.S.A.-----	Dawson
Thomas - - - - -	Patrick Henry Ward-----	Thomasville
Towns and Union - - - - -	Bonnell H. Stone-----	Blairsville
Toombs - - - - -	Charles Gordon Garner, B.S.A.-----	Lyons
Troup - - - - -	Millard Francis Gaddis-----	LaGrange
Turner - - - - -	Hamilton B. Ralls, Jr.-----	Ashburn
Twiggs - - - - -	Davis S. McGee-----	Fitzpatrick
Walker - - - - -	Robert Lee Vansant-----	LaFayette
Walton - - - - -	Walter S. Long-----	Monroe
Ware - - - - -	Dr. Rudolph Jos. Heyde, D.V.M.-----	Waycross
Washington - - - - -	Herman West Bingham, B.S.A.-----	Sandersville
Wayne - - - - -	William T. Clary-----	Jesup
White - - - - -	Robert Bunyan Miller-----	Cleveland
Whiteld - - - - -	Eugene Baker, B.S.A.-----	Dalton
Wilkes - - - - -	James Luke Burdette-----	Washington

#### COUNTY HOME DEMONSTRATION AGENTS

County	Name	Post Office
Appling - - - - -	Mrs. Frankie Parker-----	Baxley
Bartow - - - - -	Mrs. Mary Williams-Segers-----	Cartersville
Berrien and Lanier - - - - -	Bennie Frances Wilder-----	Nashville
Bibb - - - - -	Mrs. Nora Emerson-Britt-----	Macon
Bryan & Effingham - - - - -	Mrs. Lorena E. Backus-----	Springfield
Carroll - - - - -	Mrs. V. D. Whatley-----	Carrollton
Chatham - - - - -	Bonnie Wells-----	Savannah
Clarke - - - - -	Mrs. Clinton B. Bryant-----	Athens
Coffee - - - - -	Maureen Hammond-----	Douglas
Columbia & Lincoln - - - - -	Pauline Haslett-----	Appling
Coweta - - - - -	Lorine Collins-----	Newnan
Crawford - - - - -	Beulah Champion-----	Roberta
Crisp - - - - -	Lou Hamilton-----	Cordele
DeKalb - - - - -	Willie Vie Dowdy-----	Decatur
Dodge - - - - -	Sarah Morris-----	Eastman
Dooley - - - - -	Mae Morris-----	Vienna
Elbert - - - - -	Lula Peek-----	Elberton
Emanuel - - - - -	Eva Hooks-----	Swainsboro
Franklin - - - - -	Blanche Whelchel-----	Carnesville
Fulton - - - - -	Floy Shannon-----	Atlanta
Glynn - - - - -	Mrs. Madge B. Merritt-----	Brunswick
Green, Putnam and Taliaferro - - - - -	Ruby Thompson-----	White Plains
Gordon - - - - -	Moina Shackelford-----	Calhoun
Habersham & Stephens - - - - -	Mrs. Lessie H. Callaway-----	Clarksville
Haralson - - - - -	Amilee Mitchell-----	Buchanan
Harris - - - - -	Mrs. Hettie M. White-----	Chipeley
Hart - - - - -	Annie McLanahan-----	Hartwell
Jackson - - - - -	Lurline Collier-----	Jefferson
Jasper - - - - -	Mrs. Ida M. Phillips-----	Monticello
Jefferson, Burke and Jenkins - - - - -	Mrs. Leona H. Powell-----	Waynesboro
Johnson - - - - -	Clemmie Massey-----	Wrightsville
Lumpkin - - - - -	Irene Moore-----	Dahlonega





*The "Little International" Livestock Show was a distinctive feature of student activities this year.*





*A class of Jerseys and the students who fitted them for the "Little International."*



*Students with a class of Southdown lambs fitted for the "Little International."*

Macon	Ola Sammons	Montezuma
Mitchell	Mortimer Schley	Camilla
Morgan	Mrs. Mary S. Offutt	Madison
Muscogee	Jessie Fortson	Columbus
McDuffie	Mattie Lee Cooley, A.B.	Thomson
McIntosh	Sara Moore	Darien
Newton & Rockdale	Mary Norman	Covington
Pierce & Brantley	Mrs. Annie W. Wiley	Blackshear
Polk	Zelia Phillips	Cedartown
Pulaski	Sarah Smith, A.B.	Hawkinsville
Rabun	Emma Re Lewis	Clayton
Richmond	Lucile Turner	Augusta
Stewart & Webster	Mrs. Tassie O. Clark	Richland
Spalding	Mrs. Myrtie Sanders-Sibley	Griffin
Sumter & Schley	Bonnie Parkman	Americus
Tattnall	Maggie Bethea	Reidsville
Terrell	Mrs. Helen G. Gurr, A.B.	Dawson
Thomas	Lilla Forrest	Boston
Toombs	Mrs. Lorena V. Thorpe	Lyons
Towns	Mrs. Maggie Berrong	Hiawassee
Twiggs	Adnah Duckworth	Jeffersonville
Union	Mrs. Walter Lewis Ryals	Blairsville
Walton	Margaret Burge	Monroe
Ware	Mabel Hogeboom	Waycross
Wayne	Mrs. Bessie V. Griffin-Surrency	Jesup
Whitfield	Mrs. Elizabeth Moore	Dalton
Wilkes	Mrs. Winnie House	Washington

### NEGRO AGENTS

As required by the Smith-Lever Act and a Memorandum of Agreement between the Board of Trustees of the Georgia State College of Agriculture and the U. S. Department of Agriculture, the following negro agents are employed to carry on extension work in agriculture and home economics exclusively among negroes:

### NEGRO AGRICULTURAL AGENTS

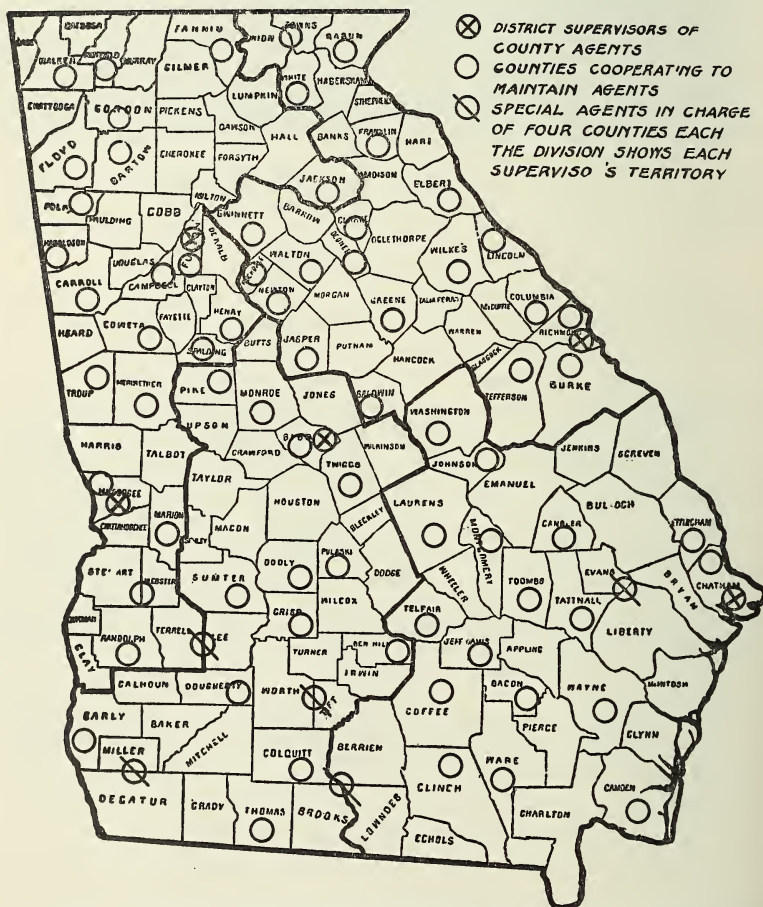
Eugene A. Williams, District Agent	Savannah	
Bulloch	Benjamin S. Adams	Statesboro
Clarke	Percy H. Stone	Athens
Houston	Otis S. O'Neal	Ft. Valley
Liberty	James U. H. Simms	McIntosh
Rockdale	William W. Hatcher	Conyers
Spalding	Sanford H. Lee	Griffin
Sumter	Elbert Stallworth	Americus
Troup	William R. King	LaGrange
Ware	Arvol H. Hinesman	Waycross
Washington	Thomas Watson Brown	Sandersville
Wilkes	John Henry Bonner	Washington
Hancock	Moses Aaron Hubert	White Plains
Laurens	Thomas George Carleton	Dublin

### NEGRO HOME DEMONSTRATION AGENTS

Juanita Conyers, District Agent	Savannah	
Bibb	Nellie Martin Bunn	Macon
Camden	Matilda Ann Harris	St. Marys
Chatham	Evelyn Conyers	Savannah

Dougherty	-----	Floreine Blount	-----	Albany
Glynn	-----	Mary Christiana O'Neal	-----	Brunswick
Houston	-----	Mrs. Jennie C. O'Neal	-----	Fort Valley
Jackson	-----	Rosa Love	-----	Jefferson
Laurens	-----	Effie Lampkin	-----	Dublin
Liberty	-----	Mrs. Anna C. Stoney	-----	McIntosh
McIntosh	-----	Ruby C. O'Neal	-----	Darien
Muscogee	-----	Charlotte Virginia Sneed	-----	Columbus
Newton & Rockdale	-----	Seabie Russell	-----	Covington
Polk	-----	Lovie Mathis	-----	Cedartown
Sumter	-----	Lily I. Gaines	-----	Americus
Washington	-----	Mary Jones	-----	Sandersville
Walton	-----	Mrs. Eddie Mae Darden	-----	Monroe

There are at the present time 232 employees in the extension division of the College, as follows:



Location of district supervisors, special and county agents. The divisions show each supervisor's territory.



### Men

Supervisors with headquarters at the College-----	4	
Specialists with headquarters at the College-----	21	
Supervisors with headquarters in the field-----	7	
Special Agents with headquarters in the field-----	4	
County Agents with headquarters in the field-----	88	124

### Women

Supervisors with headquarters at the College-----	3	
Specialists with headquarters at the College-----	3	
Supervisors with headquarters in the field-----	5	
Home Dem. Agents with headquarters in the field-----	75	86

Clerks employed in Extension Service-----		22
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Total number of employees-----		232
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### EXTENSION FUNDS 1921-1922

The total available funds for extension work in Georgia for the fiscal year ending June 30, 1922, amounts to \$492,929.61. The sources from which these funds are received are shown below in an itemized statement.

Federal Smith-Lever -----	\$161,853.84
State Smith-Lever -----	100,000.00
Federal Extension Work-----	63,272.43
States Relations Office, U.S.D.A.-----	38,000.00
Other Bureaus of U.S.D.A.-----	7,553.34
Farmers' Institutes Fund U.S.D.A.-----	2,250.00
Funds appropriated directly towards agents' salaries by counties of Georgia, approximately----	120,000.00
Total -----	\$492,929.61

### DUTIES OF COUNTY AGENTS

#### AS DEFINED BY THE STATE SUPREME COURT

"The county agents are required to make farm surveys, arrive at farm problems and assist in solving them, to conduct demonstrations for adult farmers on the rotation of crops, improvement of the soil, better methods of cultivation and the rational use of fertilizers, to develop the swine industry by the use of better pastures, better bred herds and by fighting hog cholera, lice, other diseases and parasites, to enlarge the beef industry by the use of better bred sires and the development of pure bred herds, to assist in improving the farm dairy through the introduction of pure bred sires, the use of balanced rations and the keeping of methodical records, to demonstrate the proper care of the home orchards, home gardens, small fruit and truck crops, to encourage local fairs and clubs for the purpose of securing united effort in developing community enterprise such as co-operative creameries, meat-curing houses, methods of controlling boll weevil, and co-operation in marketing farm products, and to co-operate with the county school superintendents and teachers in the organ-

ization of boys' and girls' agricultural club work, and the introduction, use and study of home economics in the public schools."

Georgia was one of the pioneer states in developing all phases of extension work. It was largely through its lead that the South has developed the boys' and girls' club work to such an extent that it has commanded the respect and admiration of the whole country. Agricultural extension work was inaugurated by the State College of Agriculture in January, 1908.

The first extension work consisted of an educational train which made a tour of the state, visiting every county having a railroad. This aroused such an interest in agricultural education as to influence the Georgia legislature to make an appropriation for extension teaching amounting to \$10,000.00. With this fund extension work was begun in horticulture, agronomy, dairy husbandry, and boys' and girls' club work. The dairy extension and the boys' and girls' club work were carried on in co-operation with the U. S. Department of Agriculture.

In 1911 the legislature increased the appropriation for extension work to \$40,000.00. With this increased appropriation the soil surveys, livestock, poultry, and county agents' work in agriculture and home economics, were added to the lines of work already established.

In 1914 the Smith-Lever Act was passed, which gave to the states additional funds for carrying on all forms of extension work through the county agent system. As these funds become available from year to year more men and women agents are trained and employed to render expert service to the farmers, farm women, boys and girls. The passage of this Act provides for co-operation with county officials and the county farm bureaus. Such co-operation is now maintained with all counties employing agents.

### **BOYS' CLUB WORK**

There were 6,338 boys enrolled in club work in Georgia in 1921. They grew corn, cotton, wheat, oats, potatoes, peanuts, pigs, calves and sheep valued at more than \$500,000.00 and won prizes to the value of \$30,000.00. These figures show not only the material side of this piece of educational work, but also the attention it commands from the people of the state who are willing to contribute a large sum to encourage this type of practical education.

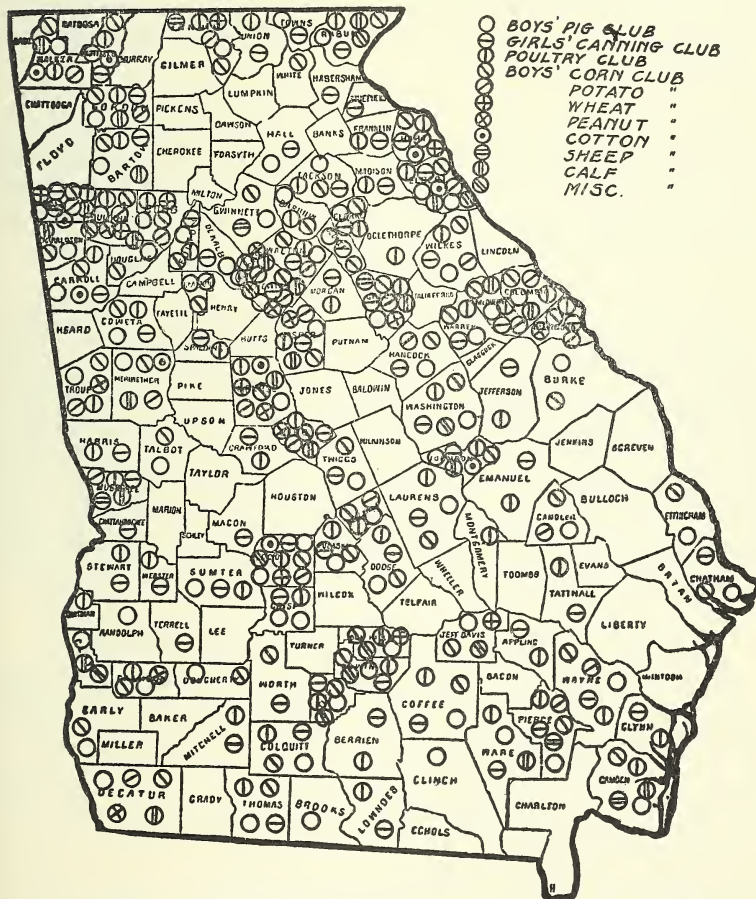
The boys' club work is organized and conducted by the county agents in co-operation with the school forces of the state. The teachers assist materially in making enrollments and keeping up the interest of the boys after they begin their work. Where this co-operation is most complete we have the largest number of club members and get the best results.

The agents are no longer trying to render personal service to

every club member. This plan has been found inefficient and expensive. Instead, they teach in small groups usually at or near the school where the boys attend. The teachers do some very effective work in getting the boys out for all field meetings. These meetings are made pleasant and the club members look forward to them with genuine interest.

### Short Courses

In addition to the meetings in the communities, a county short course is held annually at some place within reach of everyone. These short courses assume the form of club camps and picnics, and last from one to six days. Games of all kinds are engaged



*Location of boys' and girls' clubs in the state, 1921-1922.*

in and one hour each day is given over to instruction in agricultural and home economics subjects. One or more such short courses was held in all counties last year. In cases where the club girls are in attendance social features are added.

District contests were held at the District A. & M. Schools at which leading club members of the counties were in attendance. Detailed instruction was given in subjects which will fit the student for better club work.

The state short course for boys and girls was held at the Georgia State College of Agriculture, in August. Approximately 200 boys and girls were in attendance.

The Southeastern Fair School was held in connection with the Southeastern Fair in Atlanta. Livestock work was stressed at this short course. The attendance last year was 233 boys representing 118 counties.

### **Exhibits**

The boys' club exhibits at the county fairs in 1921 were above the average in quality. These were assembled at Atlanta, Macon and Savannah, and were seen and admired by thousands. Club boys continued to take their full share of prizes in competition with the adult breeder.

### **Judging Contests**

The club members take an active interest in all forms of livestock judging contests at county, district and state fairs. These contests are very popular and are giving the boys some very fine training in this field of agricultural education. The International Livestock judging contest at Atlanta is one of the chief features of the Southeastern Fair. Teams from seventeen states competed. The Georgia team of four boys were selected at the state short course and were given two months' intensive training for these contests. The team did excellent work and made a splendid showing, making a higher score than several teams from northern and western states.

### **RESULTS OF COUNTY AGENTS' WORK FOR 1921**

Notwithstanding the ten per cent reduction on a 1919 basis of funds appropriated by the state, thus making the amount available for Extension Work more than \$50,000.00 less than we would have received had the state fully offset the Federal funds, we have been able through reductions in other important projects to keep the average number of County Agents practically the same as in 1920. There were more spontaneous calls on the part of counties last fall for agents than we have ever had before at this season of the year. We have endeavored to meet these requests, despite the reductions.

After the funds were fully set up for as many counties as we





states, but these two counties are ready to co-operate for another agent as soon as we have the funds. Two new counties have been added since the decision was rendered.

The work is now in progress in ninety-six counties, being carried on by seventy-five white county agents and four special county agents in charge of four counties each, and five supervising agents. We feel that the agents have accomplished more successful work the past year than ever before. This work is accomplished more nearly with groups, thus reaching a greater number by the efforts put forth.

The farmers have shown a much better disposition in working with the agents than previously, and this is serving to broaden the usefulness of the agents in many ways and making of them instructors to the farmers and boys with whom they work.

The people are showing a readiness to group themselves in the interest of co-operation in the various projects. This grouping serves to reach a greater number, makes the work more definite, and stimulates closer attention to detail in both production and marketing phases. Thus the figures given below of the number of demonstrations conducted, do not fully show the results of the agents' work because many of the demonstrations are conducted for the benefit of several rather than the one farmer on whose farm the demonstration is conducted.

For instance, on the program of work of a community council group there would be twelve or fifteen farmers who might want assistance in establishing a permanent pasture or a home orchard or some other project. The plan that is now being carried out in many instances by the agents is to have those interested in the same project to select two or three farms and have the demonstrations conducted thereon during the year. The others interested then get the information from these demonstrations, and in this way the agents' efforts reach a much greater number than would otherwise be the case.

The following is a tabulation of some of the work by county agents for 1921.

### Demonstrations in General Field Crops

Crop	Demonstrators and Co-operators	Acreage	Yield Per Acre	Increase per acre over average
Corn - - - -	3,309	95,420	33.8 bu.	13.7 bu.
Cotton - - - -	4,382	58,424	738 lbs.	397 lbs.
Oats - - - -	4,542	48,198	32.4 bu.	10.3 bu.
Wheat - - - -	3,729	11,282	15.4 bu.	4.1 bu.
Rye - - - -	1,538	8,180	13.1 bu.	3.2 bu.
Alfalfa - - - -	452	972	3.2 tons	.5 ton
Crimson clover	358	2,125	Used for soiling	Grazing, seed
Sorghum & peas	1,516	10,924	2.5 tons	1.0 ton
Cowpeas - - -	4,123	30,985	Seed 13.3 bu.	Seed 3.9 bu.
			Hay 1.2 tons	Hay .4 ton
Soy beans - -	909	3,107	Seed 11.8 bu.	Seed 3.7 bu.
			Hay 1.4 tons	Hay .9 ton
Velvet beans -	2,758	48,555	Seed 18.2 bu.	Seed 4.5 bu.
			Used mainly for grazing	
Peanuts - - -	925	18,483	35.8 bu.	9.2 bu.
			Hay 1.0 ton	.8 ton
Vetch - - - -	49	62	2.6 tons	
Bur clover - -	157	373	Used for grazing	
Lespedeza - -	110	743	Used for pasture	
Carpet grass -	76	648	Used for pasture	
Red clover - -	45	180	Used for grazing mainly	
Sudan grass -	27	57	2.3 tons	
Total - - -	29,005	338,718		

### Demonstrations in Horticultural Crop

Sweet potatoes	1,789	7,390	139 bu.	55 bu.
Irish potatoes -	433	1,277	119 bu.	38 bu.
Tomatoes - - -	183	387		
Home orchards		Trees		
Apple - - - -	352			
Peach - - - -	1,575	170,156		
Other - - - -	755			
Orchards—				
Inspected - -	2,025	626,012		
Pruned - - -	1,740	396,669		
Sprayed - - -	1,127	351,299		
Treated, for				
borers - -	810	207,995		
Planted - - -	398	143,292		
Total - - -	11,187	1,903,487		

### Demonstrations in Feeding Animals

Type	No. of Demonstrations	No. of Animals
Dairy cattle	1,697	8,773
Beef cattle	30	1,414
Hogs	659	4,886
Sheep	71	1,235
Total	2,457	16,308

### Animal Industries

No. pure bred bulls bought.....	146
No. pure bred beef bulls bought.....	60
No. pure bred dairy cows bought.....	1,470
No. pure bred beef cows bought.....	880
No. pure bred boars bought.....	661
No. pure bred sows bought.....	2,102
No. pure bred rams bought.....	34
No. pure bred ewes bought.....	147
No. pure bred jacks and stallions bought....	8
No. brood mares bought.....	116
Hogs inoculated .....	96,340
Cattle treated .....	12,957
Hogs treated .....	84,548
Sheep treated .....	573
Horses treated .....	1,232
Cows tested .....	1,526
Cream routes or stations established.....	72
Cheese factories established .....	1
Poultry demonstrations .....	442
Fowls in demonstrations.....	42,604
Poultry management improvement.....	3,986
Birds on these farms.....	53,538

### Farm and Home Improvement

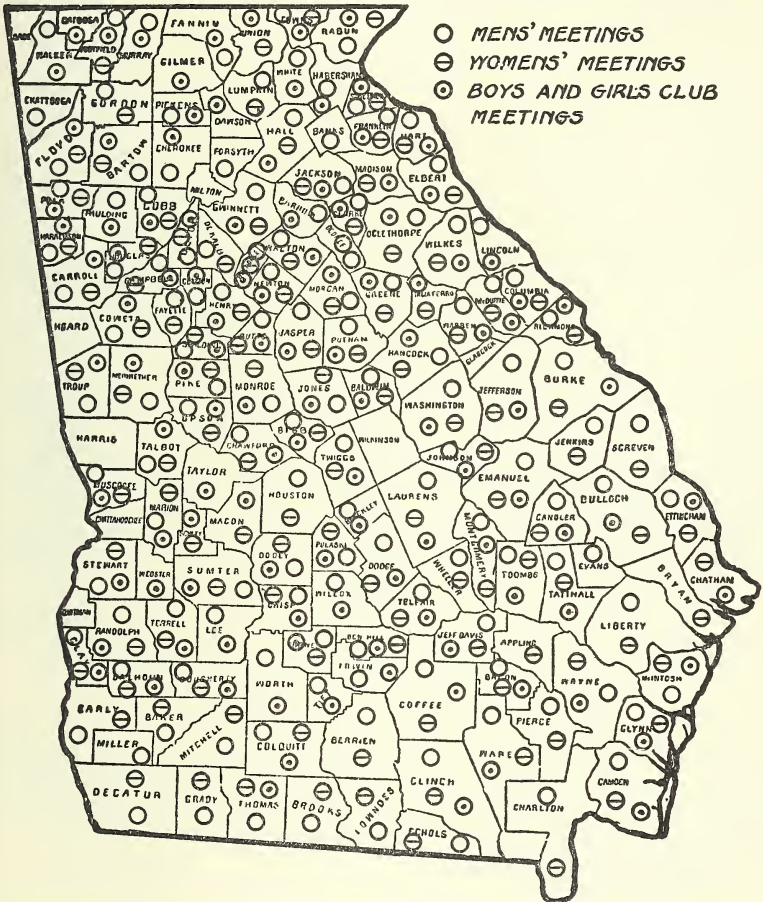
No. of silos built.....	94
Dipping vats built.....	52
No. buildings assisted in erecting.....	643
No. farm buildings assisted in improvement..	1,111
No. new building plans furnished.....	734
No. farm buildings whitewashed.....	1,081
No. home water systems installed.....	197
No. light systems installed.....	205
No. new pastures established.....	803 acres 16,091
No. old pastures renovated.....	887 acres 15,983
No. drainage systems installed.....	157
No. farmers induced to terrace land.....	2,785 acres 69,033
No. farmers induced to remove stumps.....	1,376 acres 20,827
No. home gardens planted or improved.....	10,277
No. road demonstrations assisted.....	88

### Farm Machinery Purchased

Binders .....	170
Hay presses .....	210
Gas Engines .....	293
Two-horse cultivators .....	569
Tractors .....	319
Motor trucks .....	272
Corn planters .....	783
Ditching machines .....	61
Mowers .....	504
Grain drills .....	389
Disk harrows .....	775
One-horse cultivators .....	1,189
Plows .....	2,553
Hay loaders .....	6
Farm levels .....	54
Grading machines .....	16
Hay rakes .....	240



Ensilage cutters -----	52
Cream separators -----	141
Spraying machines -----	206
Manure spreaders -----	187
Small tools -----	5,930



*Twenty-eight thousand three hundred and seventy-one meetings with an attendance of 683,365 were held by the agents of the Georgia State College of Agriculture, 1921-1922.*

**CO-OPERATIVE MARKETING ACTIVITIES**

The county agents have rendered valuable assistance to the farmers through their organizations in co-operative purchases and sales of farm commodities. These co-operative efforts which are being fostered by the agents are inducing farmers to consider better methods of marketing their crops, and are leading them to understand that it pays to give attention to marketing as well as to production.

In our judgment such demonstrations are very valuable. Many of the agents and farmers are making marketing plans before producing the crops. This is the only safe way, especially for new crops. The value of the efforts of the agents in this respect is shown below in the summarized values and savings over local or listed prices.

#### Co-operative Buying

Commodity	Value	Saving
Cattle - - - - -	\$ 6,900	\$ 3,062
Hogs - - - - -	5,056	1,436
Grains - - - - -	2,715	577
Seed - - - - -	26,846	6,060
Fertilizers - - - - -	215,235	57,044
Lime - - - - -	7,969	1,981
Cottonseed meal - - -	35,511	9,330
Miscellaneous - - - -	131,145	35,250
Total - - - - -	\$441,377	\$114,740

#### Co-operative Selling

Cattle - - - - -	290,143	8,650
Hogs - - - - -	777,492	242,441
Cotton - - - - -	13,110	822
Seed - - - - -	5,890	1,270
Irish potatoes - - - -	140,454	39,260
Sweet potatoes - - - -	397,618	18,379
Truck crops - - - - -	161,030	55,555
Grain - - - - -	24,937	8,911
Corn - - - - -	140,045	1,435
Peanuts - - - - -	84,255	8,215
Miscellaneous - - - - -	27,169	5,504
Total - - - - -	\$2,062,153	\$390,442

#### MISCELLANEOUS ACTIVITIES

From the miscellaneous efforts of the agents it is noted that they are besought by the farmers rather than the agent having to look up the farmers. Many of the agents have definite office hours in order to economize time. The list below will indicate something of their efforts along miscellaneous lines.

Number of visits by agents to—

Demonstrators - - - - -	39,328
Co-operators - - - - -	26,073
Other farmers - - - - -	29,406
Business men - - - - -	13,783
Boys and girls—club members - - - - -	25,912

134,502

Number of miles traveled—

Railroad - - - - -	80,646
Team - - - - -	14,163
Automobile - - - - -	549,005
Otherwise - - - - -	21,274

665,088

Calls on agents relative to work at office or home—

Personal -----	65,204
Telephone -----	29,787

	94,991
No. farmers' meetings held-----	5,903
Meetings addressed -----	3,890
Field meetings held -----	2,754
Approximate attendance -----	241,849
No. of official letters written-----	124,978
No. of articles prepared for publication-----	4,644
No. of different circular letters prepared-----	1,720
No. copies such letters-----	223,767
Bulletins distributed, U. S. Dept. of Agriculture-----	62,078
Bulletins distributed, College of Agriculture-----	64,969
Visits to schools -----	5,443
Schools assisted in outlining an agricultural course-----	365
Extension schools or short courses assisted in-----	79
Total attendance at these schools-----	11,931
Total number of days engaged in these schools-----	236
Farmers attending courses at colleges as result of agents' efforts -----	1,042
Visits to agents by specialists from the College or U.S.D.A.-----	1,064
Demonstrators, co-operators, and club members having exhibits at fairs -----	4,072
Farm account books distributed to farmers-----	621
Farmers in counties keeping cost records complete, 499; partial, 2684. Total -----	3,183
Farmers selecting seed from field-----	14,276
Farmers growing sugar cane or sorghum for syrup-----	11,384

Division of Agents' Time

Time spent in office—

Correspondence -----	38%	
Conference -----	33%	15%
Miscellaneous -----	29%	
	100%	

Time spent in field—

Supervising regular demonstrations-----	32%	
Other farm visits -----	39%	
At meetings -----	9%	85%
Assisted in short course work-----	5%	
Organization -----	15%	
	100%	

MARKETING

For a good part of the past year we had three men employed in the Department of Markets: A market leader, who had general supervision of the work; an extension agent in marketing, who handled the marketing of fruits and vegetables; and an extension agent in livestock marketing. These commodity marketing specialists have developed their work along lines which are of greatest assistance to the farmers in the handling of their market problems.

The formation of commodity marketing associations of farmers has been encouraged, but in all this work we have been cau-

tious not to oversell the idea of co-operative marketing, and have impressed upon the farmers what we termed the correct fundamentals of co-operative marketing. It has been our purpose to help steer co-operative associations along safe lines and let the farmers handle the selling of their products through these organizations. The development has naturally been slow. This is probably fortunate. A more detailed account of this work is given below as taken from the report of the commodity marketing specialists.

In this line of work, stress has been laid upon the importance of properly grading fruits and vegetables. Numerous demonstrations have been given in harvesting, grading, packing, and loading apples, sweet potatoes, watermelons, white potatoes, tomatoes, snap beans, and other products. Displays have been put up at a number of the city curb markets and at fairs, illustrating approved methods of preparing and offering products for sale.

Investigations were made to determine the relative efficiency of certain shipping containers and their acceptability to the trade. This work will be further developed. It is evident that many southern products are sold at a disadvantage on northern markets because they do not arrive in good condition, due to the use of improper containers and faulty bracing in cars. Much work remains to be done to determine factors affecting fruits and vegetables in transit and to induce shippers to be guided by information already available.

Considerable work has been done in promoting the proper methods of operating sweet potato storage houses in a number of counties in the state, and in connection with this work over fifty demonstrations have been given in grading and packing sweet potatoes.

A car-loading demonstration was given at the College during the Market Conference in January. The methods of loading and bracing both crates and baskets were shown. This was helpful to many of the county agents and farmers. This demonstration created an unusual amount of interest.

In addition to the car-loading demonstration given during the Market Conference there was installed in the Animal Husbandry building a comprehensive exhibit illustrating methods of grading and packing various commodities. This exhibit was prepared by the different College divisions. It is doubtful if an agricultural display has ever been put on in the South having a greater educational value than this, from the standpoint of marketing farm products.

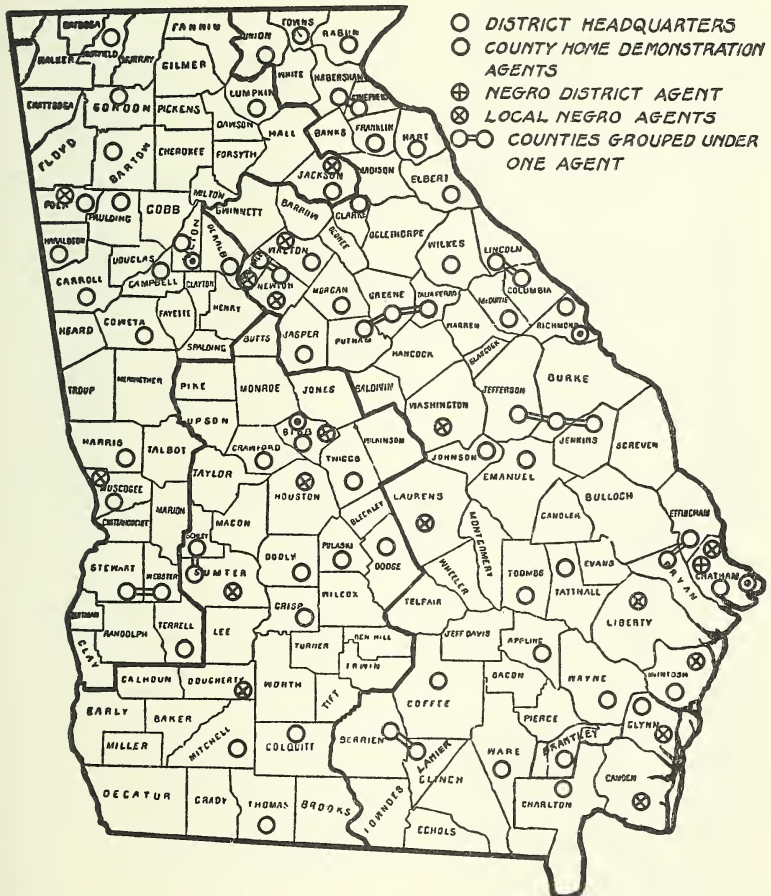
Following the Market Conference at the College in January a series of meetings was held, the itinerary including meetings in practically every county in the state. In each of these meetings marketing was discussed by a representative of either the College,



the State Department of Agriculture, the U. S. Department of Agriculture, or a farmers' organization.

The co-operative livestock sales which were started in 1916 have steadily increased. Some of the local associations ship co-operatively as well as making f.o.b. sales. In the beginning all sales were handled on an f.o.b. basis. At the present time a good number of county agents are directing these sales and shipments without outside assistance. Lost motion in marketing is practically eliminated in the co-operative sales and shipments.

The work in livestock marketing included investigations in costs of marketing, to determine the relative advantage of selling f.o.b.



*Location of home demonstration agents.*

or by consignment, and to secure data on shrinkage of animals in transit.

A survey of breeders of purebred livestock in the state has been made in order that individual farmers and club members may secure stock of the type and quality desired with less difficulty.

For several years eggs have been sold co-operatively in a number of counties. This year several county agents have developed co-operative poultry sales, in which live poultry was sold in carlots.

A survey of all markets handling syrup, peanuts, hay and grain has been made and growers have been kept in touch with these markets. We have not handled sales but have furnished information as to methods of preparing products for market, and have given out such information as was available relative to market conditions. We have encouraged farmers to use the market news service and inspection service furnished by the U. S. Bureau of Markets and Crop Estimates.

## HOME DEMONSTRATION ACTIVITIES

### Organization

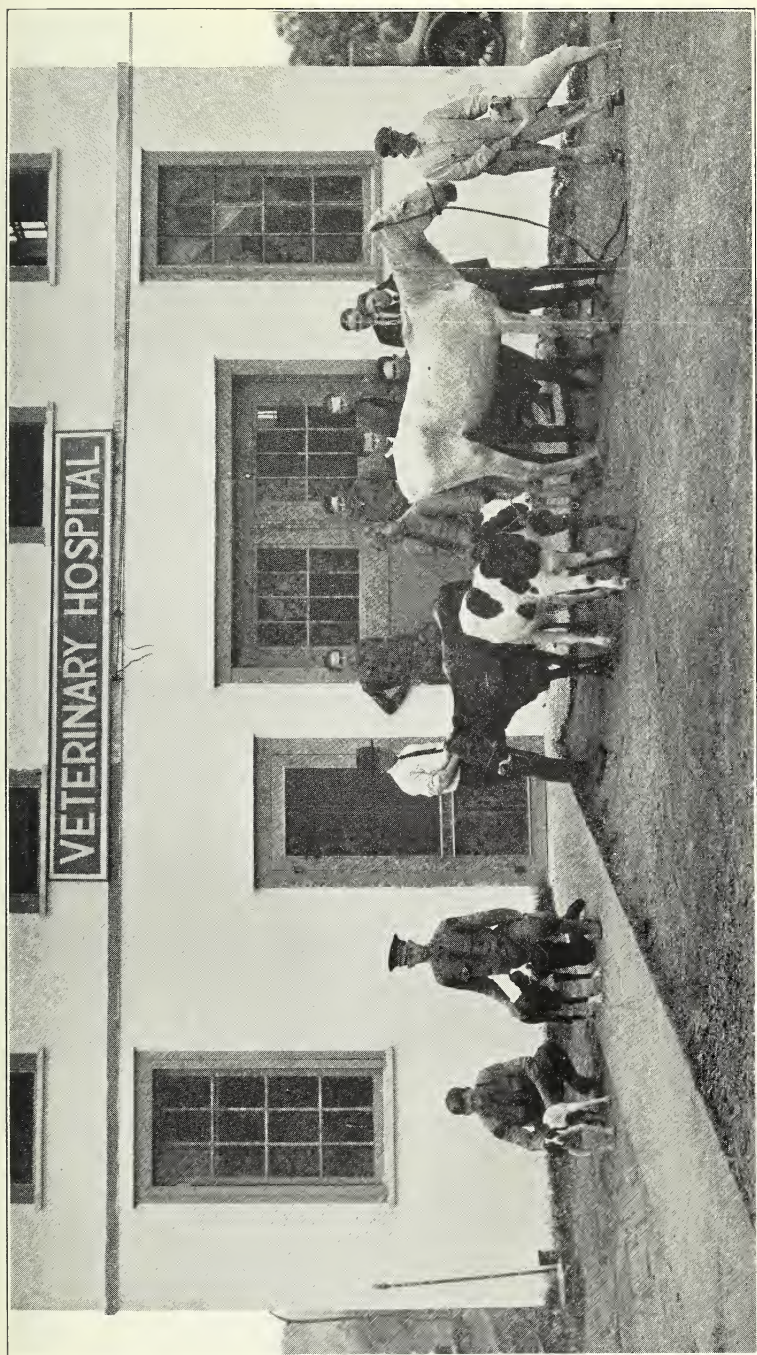
During the past year sixty-eight counties were organized in home demonstration work under a supervisory staff of a state agent and five district agents, aided by four specialists. For the work among negroes, twelve local home demonstration agents were appointed and a negro district agent.

Following the program of work adopted at the beginning of the year, stress has been placed upon the organization of groups of women and girls for the following lines of work: Food production and utilization and marketing of products, selection and care of clothing, home improvement, girls' canning and poultry clubs, community and school betterment.

### Nutrition

In the intensive demonstrations to correct the widely prevalent condition of malnutrition among children, enthusiastic response on the part of individuals and organizations co-operating with the home demonstration agents has been met. These demonstrations have been conducted by the home demonstration agents with the guidance of two specialists and in co-operation with state and county health officers, school officials, women's clubs and local physicians. A report of the work to date follows:

Number counties in which classes were held	44
Number classes organized	100
Number children enrolled	2,500
Number lectures on Nutrition	537
Estimated attendance	38,966
Number children not included in classes who were weighed and measured	23,459
Number clinics held for correcting physical defects	3



*Students in Veterinary Medicine who have just finished a clinic.*





*A part of the College flock of Southdown sheep.*



*The hog sale held by the Georgia Swine Growers' Association at Tennesse, in co-operation with the College of Agriculture was one of the most successful events of its kind ever held in Georgia.*





In some places, the nutrition class takes the place of the physiology class once a week, and the children are marked on what they can do. This not only develops a creative attitude on the part of the children in the class toward their own health, but the results seem to inspire all the children in the school to train for better health.

It is believed that school authorities will realize from these demonstrations that this work is very important. There is no subject in the school of more importance than that of teaching the children how to feed themselves.

This work has interested women's clubs and mothers in all sections of the state in the study of the selection and the preparation of foods. It has also increased the production and conservation of fruits and vegetables. In many instances, families have bought cows when convinced of the need for more milk for their children.

### Home Improvement

Continuing the well-established policy of increasing efficiency, releasing time of the housekeeper for the larger aspects of life, making rural homes more attractive, sanitary and healthful as well as giving rise to opportunities for recreation and fuller social life, the program of home improvement has been continued. A very popular part of this program is that of beautifying the farmstead. In some counties, this idea has spread from demonstrations made on rural home and school grounds until entire communities have been notably improved in appearance. Some results in home improvement follow:

Number water system installed.....	114
Number lighting systems installed.....	246
Number septic tanks installed.....	68
Number kitchens screened .....	869
Re-arrangement of equipment .....	856
Improvements in floors, walls, et cetera.....	1,229
Number rooms improved .....	967
Number houses screened .....	1,367
Labor-saving devices .....	1,376
Sinks and drain boards.....	150
Washing machines .....	109
Other laundry equipment .....	402
Houses repaired and remodeled.....	378
Number planting trees, shrubs, et cetera.....	8,635
Number lawns seeded .....	460
Number demonstrations in beautifying the farmstead	2,029

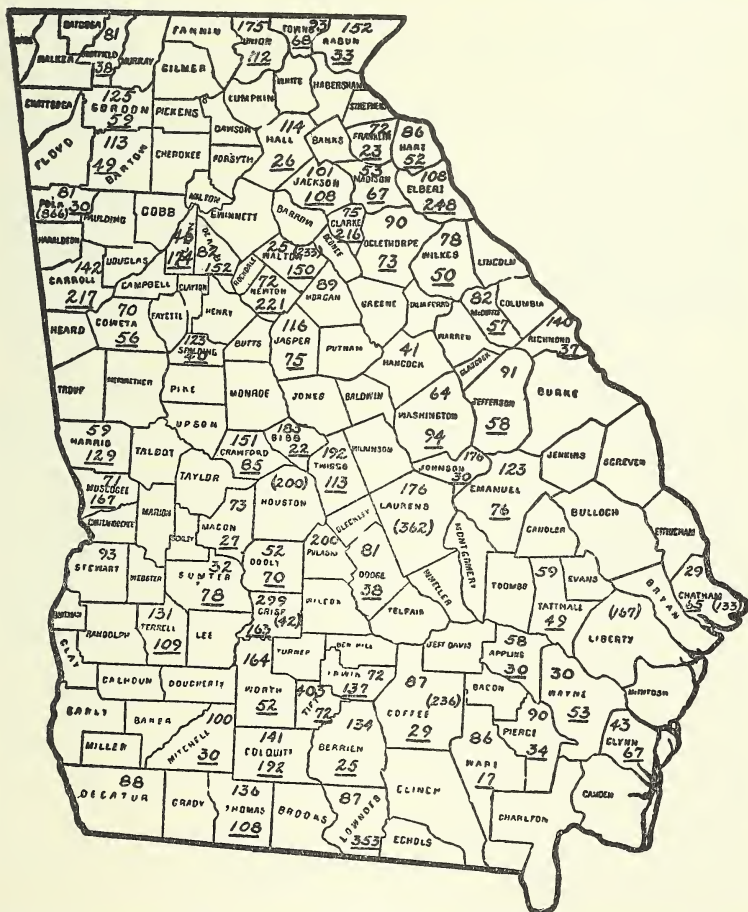
### Productive Activities

Considerable progress has been made in cooperative efforts made by community groups of women. These groups have, in many instances, focused their efforts upon standardizing the surplus products for market. In other instances, an attempt has been made to save expenditures by the more skillful handling of the income.

This applies to the work done in clothing where demonstrations in selecting and making garments, remodeling and making hats have resulted in notable savings. In one county alone the savings effected by the clothing demonstration work totalled \$1,700.00.

## GIRLS' CLUB WORK

From the beginning of the Girls' Canning Clubs in Georgia in 1911, with the organization of two counties, this work has grown until during the year 1921 in sixty-nine counties, 9,591 girls were enrolled in clubs for definite instructions and demonstrations in gardening, cookery, canning, poultry raising, sewing and other



Eleven thousand, six hundred and thirty-six girls and women were enrolled in Extension work in 1921-1922. The upper figure indicates the number of girls, and the lower which is underscored, the number of women.

phases of home work. These girls were enrolled through the schools of the various counties, and the work organized and carried on by the county home demonstration agents working in co-operation with the teachers of the rural schools.

Most of these girls are organized into clubs which have regular meetings with programs planned so as to increase the girls' interest in the practical phases of the work. Clubs are conducted so as to correlate the work as closely as possible with the school work, thus vitalizing it, and, through the schools, securing the interest of the adults in the community.

The program for the girls' demonstration clubs is based on a progressive, four-year plan. Each year the girl has a garden as a basis for her work in food preservation and cookery. At the close of the first year, each girl starts a perennial garden, and this work is continued year after year until the perennials produce sufficient income to warrant the dropping of the annual garden in the scheme of the year's work.

Along with the garden is a definite program of cookery, food preservation and sewing which gives the girl a more or less comprehensive course for which it is believed high school credit will be granted before the close of another year. Upon the satisfactory completion of the four-year program, a certificate is awarded each girl. Last year, one hundred and sixty-five certificates were awarded.

The fundamental basis of the work for girls must be production. This is necessary not only from the standpoint of furnishing food in the home, but also for providing the girls with products which they may be taught to cook and serve and for giving them a source of revenue. In addition to this regular program of food production, utilization, conservation and sewing, intensive work is given along other lines at short courses held by the county agents in various communities in the counties, or in the counties at large.

There are also district and state short courses held to which girls are given scholarships as prizes for work done. These short courses sometimes take the form of a camp, but regardless of the type of short course, considerable attention is given to recreation and social development along with the instruction in all the regular lines of club work. During the past year about eighty-five such short courses have been held with a total attendance of more than three thousand girls.

The girls in the demonstration clubs have started a "Go To College" fund. The money realized from the sale of club products is deposited in the bank to the credit of the individual girl and used by her for educational purposes. As a result of this movement, there are two hundred and twenty girls paying part of their expenses in high and normal schools, one hundred and twenty-one girls in high schools on scholarships, and two hundred and twenty-



seven girls with bank deposits. Following are some of the results:

Number of girls enrolled-----	9,591
Number girls reporting -----	5,415
Number garments made -----	17,266
Amount saved by dyeing, remodeling, et cetera-----	\$ 1,916.50
Value vegetables sold fresh-----	17,353.17
Value vegetables used at home-----	30,123.62
Value fruits sold and used at home-----	14,573.64
Value flowers sold -----	80.50
Value vegetables and fruits conserved-----	92,321.10
Value poultry raised by club members-----	142,155.00
Value other miscellaneous products-----	4,960.47
Total value -----	<u>\$303,484.00</u>

### DIVISION OF AGRICULTURAL CHEMISTRY

There has been an appreciable increase in the number of students receiving instruction in this division during the past year. An excellent spirit of earnestness has been shown by the students and the work has been, on the whole, unusually good. But for the over-crowded condition of the laboratories, which has made thorough instruction impossible, the work has been eminently satisfactory. The equipment of a new laboratory will enable the division to greatly improve the courses of instruction in advanced chemistry, and by relieving the congestion in the present laboratory, make more satisfactory working conditions in other courses.

The reports of the analyses of Lowndes and Pierce Counties have been published since the last annual report. The report of the analyses of the soils of Early and Madison Counties are in the hands of the printer and will appear at an early date. Samples for chemical analyses have been collected for Richmond and Burke Counties and will be analyzed during the present calendar year. The Acting Head of the division, who has been conducting some studies in soil solutions and comparative availability has been compelled to suspend this investigation on account of the stress of teaching and administrative duties. This work is now being resumed by Professor Lowry, of the Soil Chemistry Laboratory.

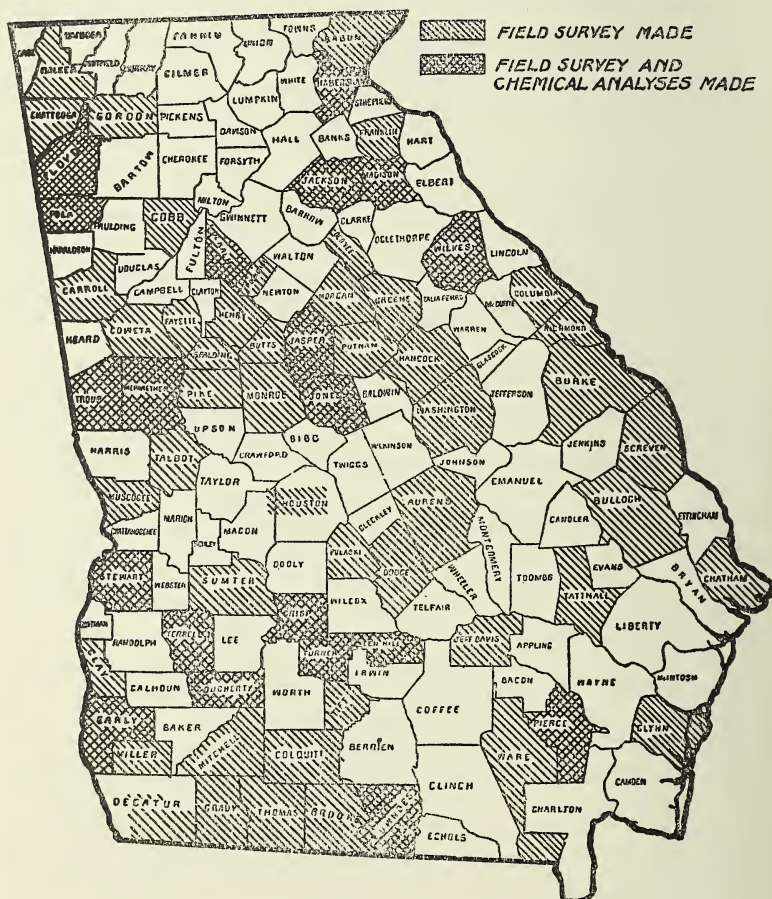
The progress of the field work in soil survey has been somewhat handicapped by unavoidable circumstances during the year. Mr. A. H. Meyer, Soil Expert, resigned in September and Mr. L. L. Brinkley, who was appointed as his successor, has been forced to resign on account of ill health. The work in Mitchell and Muscogee Counties has been completed and only a small amount of work remains to be done in Bibb and Jenkins Counties. The Bureau of Soils will issue reports of several areas within the near future.

In addition to the regular work of the soil survey, the Soil Chemistry Laboratory has lent itself to the general advancement of the interests of the College work and has co-operated with other divisions in doing considerable analytical and investigational work

in conjunction with special projects of their divisions. A larger staff and additional equipment for research would enable the division to render greater service in this respect.

During the course of the soil survey work and chemical analyses, a great mass of data has been collected relative to the distribution, character and chemical composition of the soils of this state, but it is realized that these investigations should be supplemented by field studies and lysimeter investigations. Such studies would greatly facilitate the interpretation of the work already being done and add materially to the practical and scientific value of the oil survey and chemical analysis.

The changed conditions which have so profoundly affected the



*Progress of the Soil Survey.*

agricultural practice of the state have been the occasion of numerous calls for definite information with regard to soils, their classification, adaptation and requirements, and the need for a general extension specialist in connection with the soil survey work is being keenly felt. The means for placing the mass of valuable information which we have accumulated in the hands of the farmer are inadequate to meet present day needs. This is one of the acute needs of the present.

Under heavy infestation with the boll weevil, striking differences in the adaptability of various soils for cotton have developed. Wide differences in yields are frequently directly traceable to difference in soils. On certain types, notably those of the Madison series, almost normal yields have been reported, whereas the crop was almost a total failure on types of nearly equal fertility, but unadapted to cotton under boll weevil infestation. In counties having a recent soil map it is possible to advise by correspondence and through the county agent, but in the absence of an accurate soil map, the services of a competent soil specialist would be worth thousands, perhaps millions of dollars to the farmers of the state.

Exhibits showing the nature and character of the work being done by the division were made during the Marketing Conference in January.

#### DIVISION OF AGRICULTURAL EDUCATION

All of us have accepted the proposition that vocational agriculture can and should be taught in the public high schools of our state. Few of us, however, realize the importance and size of this undertaking.

The importance of teaching vocational agriculture in our high schools can best be grasped, when we realize that three out of every four people in the state of Georgia live on farms, and when we take into consideration the rapid growth and development of our public high schools.

In 1905 we had no rural high schools. To be exact, there were only seven four-year high schools in the entire state. At the beginning of the school year of 1921-1922 there were 256 four-year public high schools, most of which are rural. Besides this, there are thirty-nine private high schools scattered throughout the state. There are now only three counties in the state without a four-year high school, public or private, and one of these counties has a junior high school.

The field of Agricultural Education is large and rapidly developing. During the next few years, our college will be called upon to give to the state hundreds of scientifically and professionally trained men to teach vocational agriculture in these schools, and to become local rural community leaders.

In preparing to meet this demand for agricultural teachers, the



College remodeled old "Lumpkin Hall" and equipped it to meet the needs of the professional courses of teachers. Adequate class rooms and laboratories have been provided.

The College has fostered and developed a first grade rural high school at Winterville, seven miles from the campus, where professional teaching practice is done. On the high school grounds at Winterville a new stucco building has been erected for this work. This building accommodates classes in both vocational agriculture and home making, and is used as a "practice school" by this division.

Every man who is preparing to teach vocational agriculture in a high school department must spend at least one month as an assistant teacher in the Winterville vocational department. The College has trained and sent out more than one hundred teachers of vocational agriculture during the past three years. There are now fifty-seven of these men employed by the high schools in every section of the state. To show that these teachers are successful in their work, it might be pointed out that, while the number of students in vocational departments increased only thirty per cent during the past year, the number of boys taking vocational agriculture increased ninety-four per cent. During the same year the financial returns from home project work increased 147 per cent.

#### **DIVISION OF AGRICULTURAL ENGINEERING**

During the past year there has been a large amount of work done toward the improvement of the courses offered in farm machinery, gas engines, tractors and carpentry.

A number of new and up-to-date machines have been added to the machinery department, giving a more complete line of farm machinery for laboratory work than ever before.

In the gas engine and tractor department there has been a great improvement in the equipment of the shop, which has been made necessary by the demand of the students for more practical work on gas engines and tractors. We are now able to handle practically all kinds of repair work in a modern and up-to-date manner. This was made possible by the acquisition of the following new pieces of machinery: One power floor drill press, complete set of drills, one lathe and its component parts, one air compressing outfit complete, one hand electric drill.

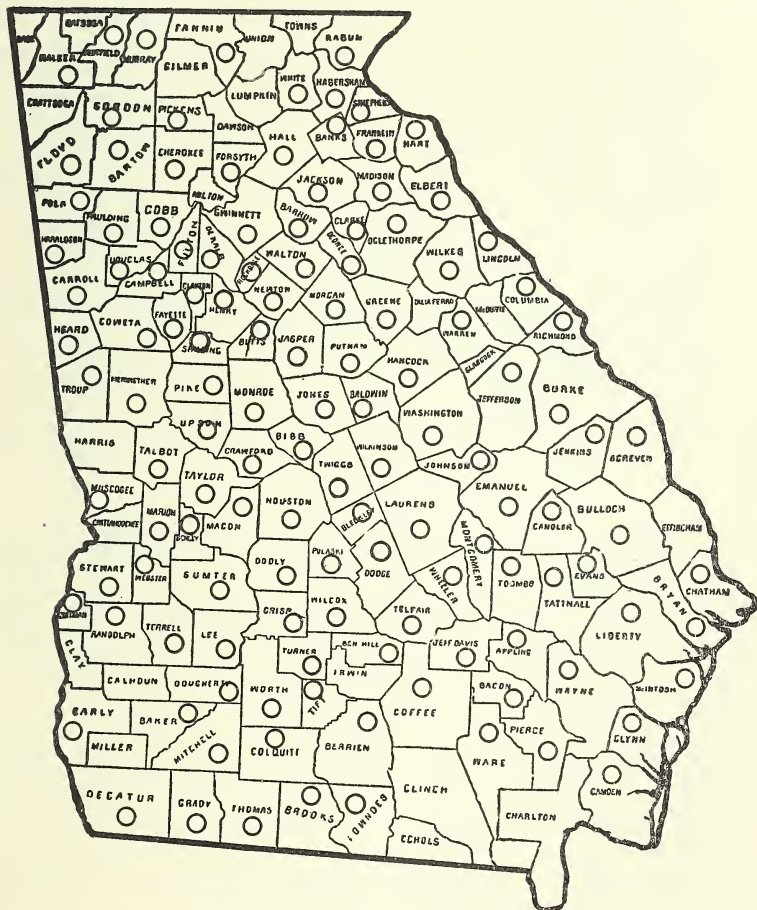
During the past year there has been more attention paid to practical work in the field with tractors than before. About 225 acres were plowed and harrowed by students with tractors. We believe that great progress has been made in the school of tractors and gas engines, due to the fact that more system has been employed than has been possible heretofore. In the past it has been a minor part, but now we are emphasizing the practical work and have realized good results from our efforts.



The carpentry department has been greatly improved during the past year. This department now occupies a room 40 feet by 100 feet. The gas engine has been discarded and the machinery is now propelled by electricity. With this improvement and the addition of a new planer, we are able to do more efficient instruction.

An addition to the agronomy barn has been built, 35x101 feet; four class rooms with steam heat, light and water in the animal husbandry building have been completed; and an addition to the poultry husbandry building 36x38 ½ feet has been completed, under the supervision of the head of this division.

The extension department, limited to one field agent, has been



*The circles indicate the counties to which blue prints were sent and in which demonstrations were held by the Agricultural Engineering Division, 1921-1922.*

very busy, owing to the increasing demands made upon it for terracing and machinery demonstrations as well as for designs and assistance for all kinds of structures pertaining to the farm, including heat, light, water and sanitation.

During the year thirty-two new designs were drawn and traced; 1,652 blue prints with 796 designs were sent out; and 97 trips made to lend assistance in the erection and remodelling of various farm structures.

Fifteen terracing demonstrations were given, with an attendance of 1,000 people, and eight demonstrations of farm machinery to 2,000 people.

#### Summary of Agricultural Engineering Extension Work

Number designs -----	796
New designs -----	32
Number blue prints sent out -----	1,652
Miles traveled -----	10,000
Visits to County Agents -----	35
Agents Meetings attended -----	5
Visits to citizens -----	62
Terracing Demonstrations given -----	15
Estimated attendance -----	1,000
Farm machinery demonstrations held -----	8
Estimated attendance -----	2,000
Aided in erection of farm buildings -----	60
Aided in improving of farm buildings -----	75
Aided in water work systems -----	3
General aid by correspondence and otherwise -----	2,500
Trips by Field Agent -----	60
Meetings attended -----	15
Meetings addressed -----	12
Attendance -----	1,800

#### DIVISION OF AGRONOMY

The interest in cotton grading continues, and facilities are being installed to make it possible to carry a larger quantity of cotton samples for this work. The difficulty in securing some of the samples makes it necessary to buy them in bale lots. Space for storing this cotton until needed for the class room was found to be necessary, and a large room in the Main Building has been remodeled for this purpose.

The work on the oil content of the seed of the different strains of College No. 1 cotton for the past several years indicate that the amount of oil in the different strains is a heritable characteristic. An effort is being made to begin work on the selection of a seed of high oil content. So far, this does not appear to be antagonistic to good length of lint and high yield. These three characteristics combined in an early-maturing cotton will mean a great deal to the wealth of Georgia.

Considerable time has been spent during the winter in trying to find several communities in which one type of cotton could be



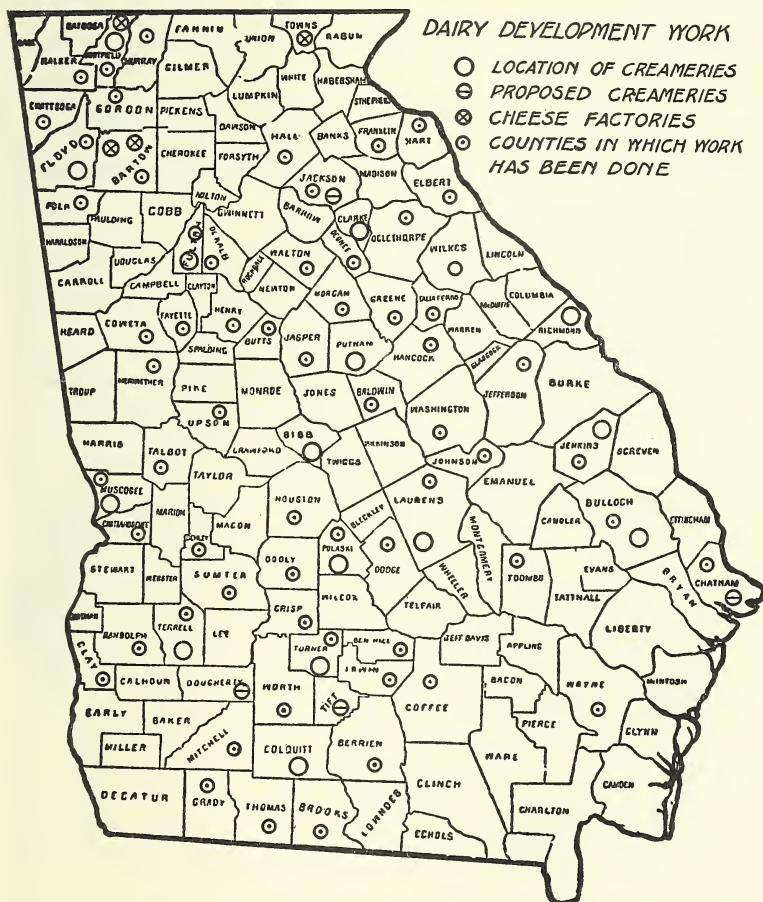




A survey of tobacco production has been made and the results have been put in bulletin form. Data on the cost of production of sweet potatoes, together with the labor requirements of a number of other crops, have been secured. It is hoped that a handbook on the labor and material requirements for various crops, for the use of county agents, can be published in the near future.

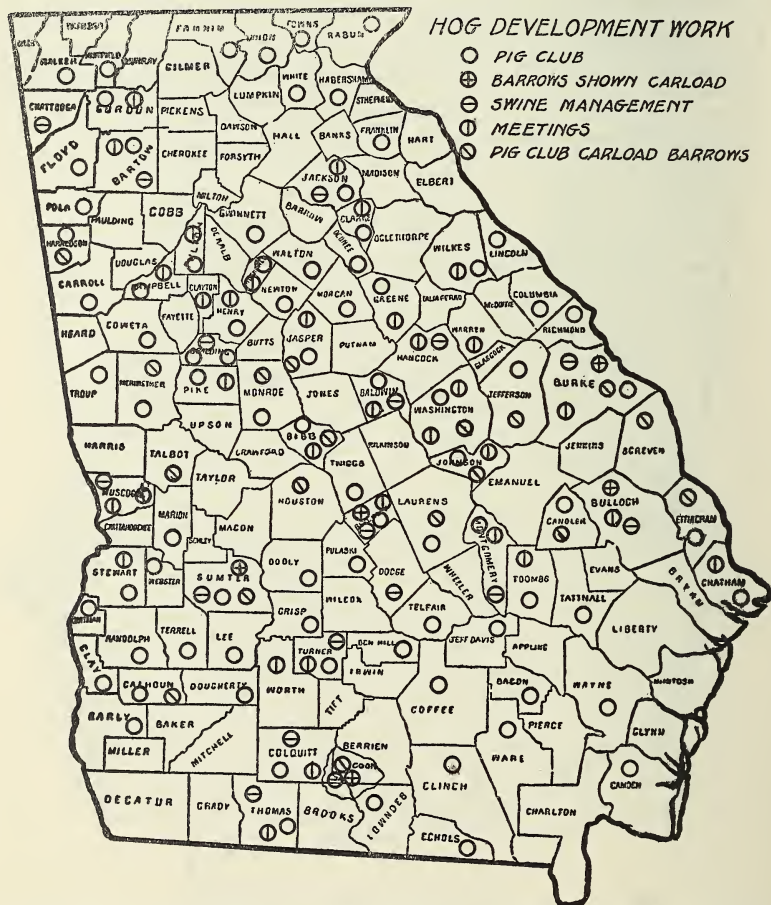
### DIVISION OF ANIMAL HUSBANDRY

Livestock is being appreciated as never before throughout the entire state of Georgia. The complete boll weevil infestation of practically the entire cotton-growing area has demonstrated forcibly the importance of farm animals in any permanent system of agriculture.



*Dairy development work, 1921-1922*

During the past year more conspicuous development has been made along dairy lines than ever before in the economic history of the state. At the present time there are fifteen creameries in operation in the state. Twelve of these have been built during the past year. Two new cheese factories have been established, and at this time all of them are running at full capacity. The creamery at Ashburn has shown most conspicuous development. This creamery was opened the latter part of September, and during the first month it manufactured two thousand-seven hundred pounds of butter; during the month of April it manufactured forty-two thousand pounds of butter. The College creamery is manufacturing about seven thousand pounds of butter per month, and since it is the only creamery located in northeast Georgia the out-



*Location of work done in developing the swine industry by the Georgia State College of Agriculture, 1921-1922.*

put can easily be increased as soon as adequate facilities are provided for handling a larger quantity of cream.

The College is co-operating with a large dairy in south Georgia in doing experimental work along the lines of producing cheese from skim milk, and replacing the butter fat with cottonseed oil.

The splendid work reported previously relative to the development of the swine industry, has continued during the past year. According to the last census report, Georgia now has 46,760 pure bred hogs. This is the greatest number of full-blood hogs owned within the borders of any other southeastern state. In order to help small breeders find a satisfactory market for their surplus breeding stock, and in order to disseminate seed stock in new territory, the College in co-operation with the Georgia Swine Growers' Association held a sale at the College in August, 1921. This meeting was so successful that a series of similar meetings were held in different sections of the state.

In order to give students more experience in fitting and showing livestock, seventy-five pure bred barrows have been secured. They will be fitted and shown in the individual classes and also as a carload at the forthcoming Southeastern Fair. The College through the swine specialist has been working to encourage the fitting and showing of barrows, in order to demonstrate the value of improved hogs in meat production. It is a matter of considerable gratification that the first carload exhibit of fat barrows was held in Atlanta last fall. This is the only show in America, with the exception of the International Livestock Exhibit held in Chicago each fall, at which carloads of fat hogs are exhibited.

On account of the growing demand for information and instructions along the lines of breeding, feeding and care of hogs, the College has made provision for the construction of a model hog barn. This is a very imposing structure, built with hollow walls, cement floors and adequate arrangements of yards, paddocks and grazing lots, and when finished will be the most modern and complete swine barn within the southern states.

The College was fortunate in being able to establish a flock of Southdown sheep on the College farm during the past year. These animals have been of much value in teaching students the judging and management of this most important class of farm animals. It is hoped that a small flock of Shropshires can be added during the coming year, and also that a flock of native ewes can be provided for the sake of comparing them with improved breeds, and also showing the value of using pure-bred sires in producing early spring lambs from the native ewes. In order that the industry may become general it is necessary for the state to pass an adequate dog law. Copies of similar laws have been secured from all the states where they are in force, and an effort will be made during the coming session of legislature to secure the enactment of such a law in Georgia.

During the past year several outstanding specimens of livestock have been added to the excellent herds maintained on the College farm. This is particularly true of the dairy cattle and hogs.

The College has continued to supervise official testing on all of the dairy breeds, and it is gratifying to note that the breeders of dairy cattle are making records that compare favorably with those of other sections of the United States.

The Saddle and Sirloin Club, which is the livestock society of the College, held a most successful public demonstration during the past year. The night horse show and livestock exhibit was the first of its kind ever attempted in the southeastern states. The initial effort was so successful that plans have been made for a more extensive show next year.

It is gratifying to report that many of the graduates have established pure-bred breeding herds throughout the state. They have been most successful in the shows and sales that have been held during the past year. Their success demonstrates the value of the type of instruction that is being given by the College.

## DIVISION OF FORESTRY

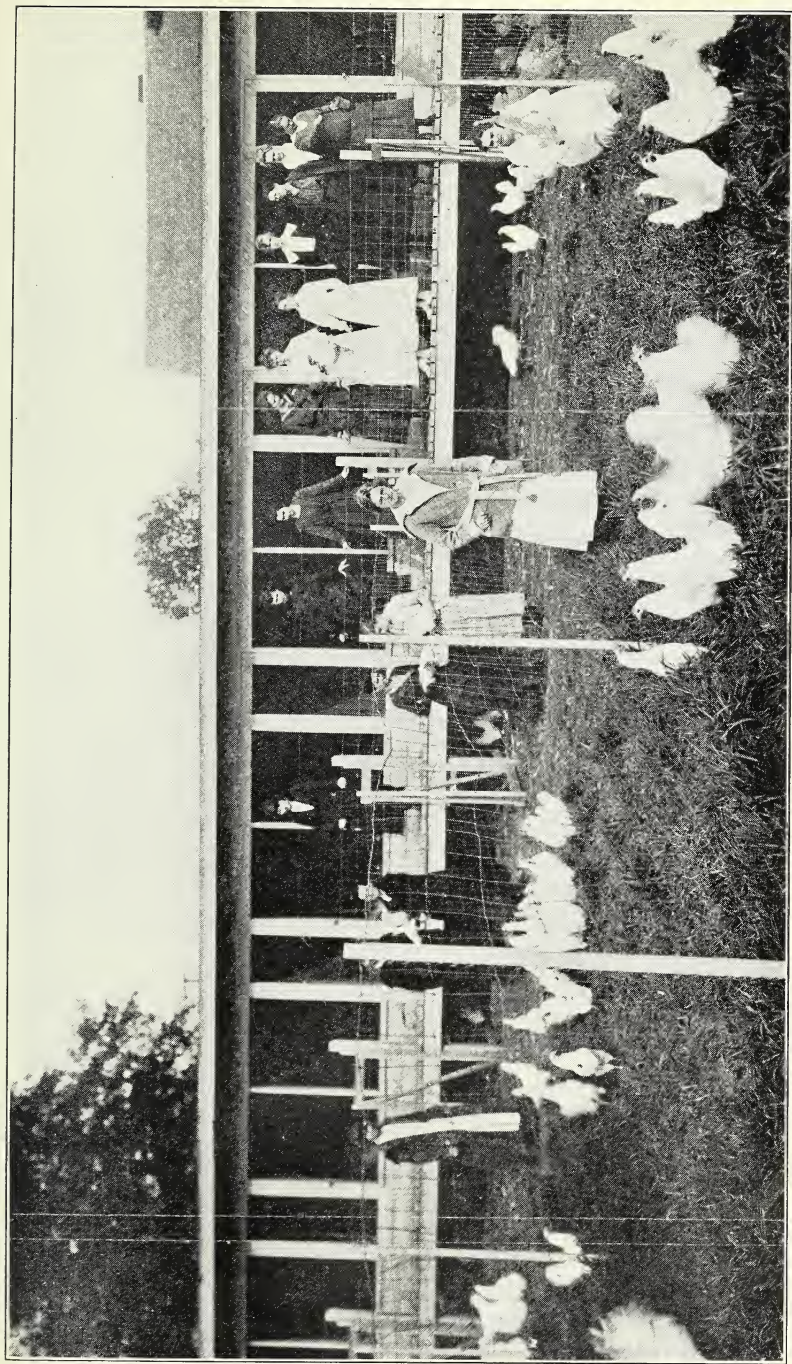
The enrollment in the division this year has more than doubled that of last year, there now being more than fifty men specializing in forestry.

As a result of the talks given during the past year before the high schools of the state, a number of students became sufficiently interested to register for the courses in this division, and as this same procedure was followed this year the same, or even better results are hoped for.

As a result of a request by the Federal Board for Vocational Education for special courses for rehabilitation men, two two-year courses have been planned and are seemingly giving entire satisfaction. One known as the Forest Ranger course is for men having a sixth, seventh or eighth grade education and combines elementary work in such academic subjects as English, history and mathematics with specialized work in forestry necessary for the men to pass the civil service examination for Forest Ranger. Thirty-three men are now registered for this work.

The Forest Assistant course has as its minimum requirements at least one or two years of high school work. The subjects scheduled are those in which the men must be proficient in order to pass the civil service examination for Forest Assistant, although they have the additional opportunity of securing profitable employment with private logging concerns or in state work. Twelve men are at present enrolled in this course. The increased enrollment made it necessary to add two men to the staff of this division.





*A class of Home Economics students judging poultry.*



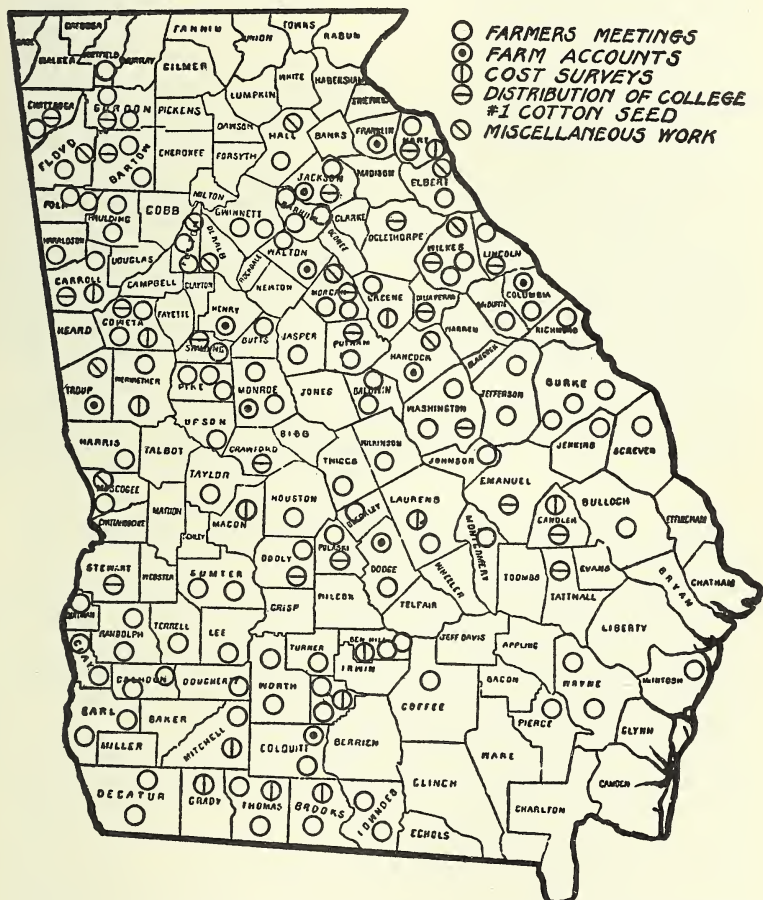


*Baby chicks, hatched at the Poultry Plant, ready for shipment.*



*Club girls judging poultry at the Short Course held in August.*

In order to emphasize the practical side of the work, as well as the theory, six weeks were spent in camp last summer in Fannin County, where twenty men received instruction in actual woods work. The camp site was furnished through the courtesy of Dr. T. H. McHatton, head of the Division of Horticulture, and may possibly be made permanent.



*Location of farmers' meetings and work done by the Departments of Farm Management and Cotton Industry, 1921-1922.*

Present plans are to hold the camp this year near Young Harris, Towns County, on land offered for this purpose by Prof. Adams of Young Harris. The citizens of this community are eager to co-operate with us in every way possible and prospects for a pleasant and profitable summer are very promising. The Pfister and Vogel Company, through Mr. Bonnell H. Stone, an alumnus of this institution, have offered the use of their 60,000 acre of forest land



for whatsoever use we desire it, so summer activities will not be limited because of lack of actual forest conditions.

### DIVISION OF HOME ECONOMICS

This division is completing its fourth year of work with an enrollment of seventy-three students doing college credit work of which thirty-six are in the long courses. Since the establishment of this work, there have been one hundred and eight registrations in the four-year course and four hundred and nineteen teachers, or extension workers in service, for the degree course in the Summer School and Winter Short Courses. By these intensive courses, the standards of teachers in service are being materially raised.

Graduates of the four-year course are now holding positions in seven vocational high schools in Georgia. Other graduates are occupying positions of prominence in this and other states, including college teaching, state supervision of Home Economics and supervising agents and specialists in extension work. Several of them are receiving salaries from eighteen hundred to three thousand dollars a year.

The calls received from this and other states for teachers in normal schools, specialists in extension work, vocational teachers and positions in institutional management have been greater than could be supplied. This is a gratifying recognition, but involves the discouraging fact that young women are not as yet sufficiently awakened to the opportunities of the women with university training in Science and Home Economics.

For the first time, a full freshman schedule of courses has been offered, involving the addition of a three-hour course in clothing, a two-hour course in drawing and designing, and a one-hour course in textiles and laundering. In the junior year, additional work in millinery and pattern designing has been offered, improving the opportunities for technical training in these lines.

Additional equipment has been installed in the Home Management Department. This has greatly strengthened the presentation of the course in Home Management which is required of students in teacher training for vocational schools. This apartment makes possible an excellent course in Home Management. The seniors who have taken this course during the past year have had valuable practice in housekeeping, budgeting, marketing and entertaining, involving the health, economic and social aspects of home-making.

In teacher training, provision is made for observation and practice teaching under conditions provided by the State and Federal Boards. This practice teaching is carried on in the Vocational High School in Winterville. This school, having both Vocational Agriculture and Home Economics, furnishes an excellent laboratory for the problems arising in the teaching of these subjects.

The scientific work in Nutrition being carried on in the Judd



Nutrition Laboratory is now supplemented with actual participation in the conduct of nutrition classes in the schools of Athens and Clarke County. These clinics and classes have been organized also for the benefit of Summer School and Winter Short Course students, thus enabling teachers and extension workers in service to get thorough training in this important phase of Home Economics.

Scientific work in nutrition has been made possible by the installation of a finely equipped laboratory, the gift of Mrs. M. E. Judd. Following this scientific training, the members of the senior class are given practical work in correcting malnutrition by conducting clinics and classes for underweight children. The first work of this kind to be established in the South was begun here in the summer of 1920, and has been carried on continuously in the elementary and high schools of Athens and Clarke County. Opportunity for this latest application of the science of nutrition to the problems of child life has thus been given not only to students in the long course, but to teachers in service who come to the Summer School and Winter Short Course for further training.

The Division of Home Economics from the beginning has maintained a high classed Cafeteria with laboratores having modern and complete institutional equipment for the training of young women in Institutional Economics.

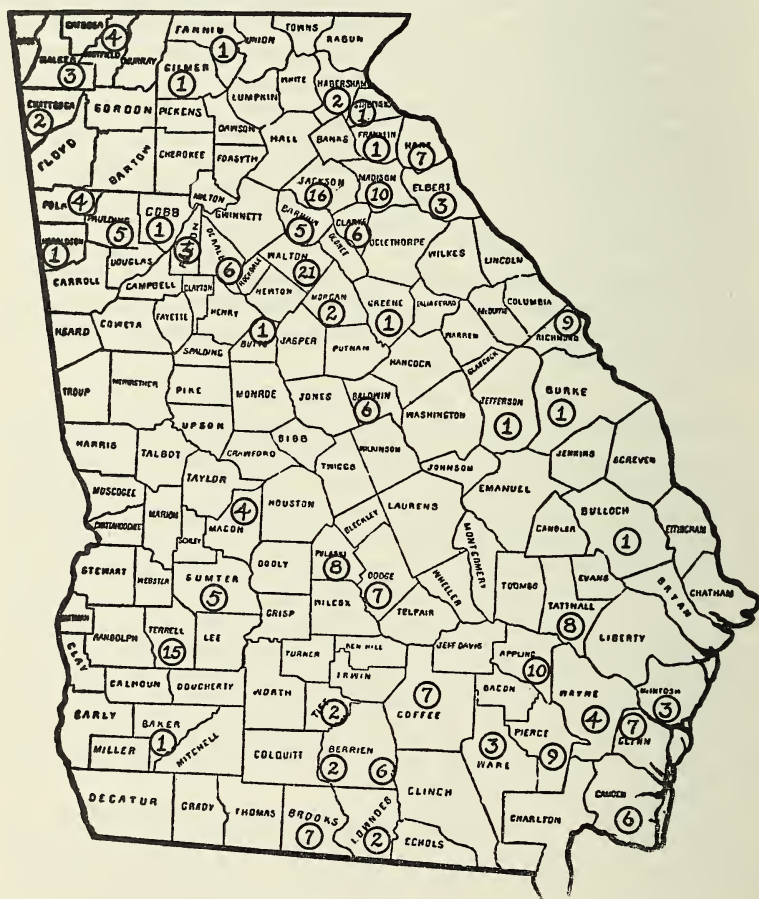
#### **DIVISION OF HORTICULTURE**

The interest that has been developing for the past several years in landscape gardening has continued. The demands for assistance are so extensive that the division finds it impossible to meet them. This work will have a most beneficial influence through the schools and churches particularly. Many movements are now being inaugurated through the state to plant and improve the highways, and the College has already been asked for assistance along this line. The automobile traffic through Georgia brings to our very doors many strangers and we should be making every effort to beautify our landscape and to conserve the natural grandeurs of Georgia in order that the travelers visiting us should carry away the proper impression of our state. It is to be expected that in time many new citizens will be brought to us through the work of the landscape artist in Georgia.

During the past year, suggestions and plans have been made for sixty-six school houses, for one hundred and forty rural homes and for forty-three churches, cemeteries and other community pieces of property. This work is to a great extent personal, and the limit of one worker is soon reached. The natural outgrowth of the landscape interest being developed is certain to be the establishment of a degree course in landscape architecture at the College.

One of the most outstanding pieces of work of the past season

has been the rapidity with which the watermelon growers took up the practice of seed treatment against anthracnose. In 1921 a representative of the College treated 3,000 pounds of watermelon seed against this disease. In 1922, following these demonstrations, the watermelon organizations of Georgia treated 30,000 pounds of seed, or enough to plant practically one-half of Georgia's watermelon acreage. It is to be hoped that the demonstrations being carried on this season with spraying watermelons will next year become a general practice as the seed treatment has.



Map showing number and location of demonstrations in landscape work, 1921-1922.

It was unfortunate that it became necessary for the work of the watermelon specialist to be discontinued at the beginning of 1922. This work is now being carried on through the help of special

county agents and in co-operation with the U. S. Department of Agriculture. The addition of a specialist to handle this line of work and also to give his attention to other trucking interests would be a step forward in the Horticultural Extension work at this time.

The fertilizer experiments on pecans, peaches and apples are progressing nicely. In time the results obtained will be of great value to the fruit growers of this state. The experimentation with figs continues to prove most interesting. The planting of Capri figs made on Jekyll Island is growing. At two other points in the state Capri plantations have been established. The search for good Capri trees has been continued along the coast line. The *Blas-tophoga grosorum* has passed another winter successfully at Brunswick, but as long as we are confined to a single tree to carry over this insect our work continues to be of a hazardous nature.

It is hoped that the continual improvement of Capri trees and the establishment of plantings of various figs will insure the continuation of this much needed insect in the state. If we are ever able to insure the production of the Smyrna types of figs within our borders, Georgia will certainly have another valuable crop. Our experimental work has been extended to take in the raspberry in north Georgia. There is one small plantation in Fannin County which was established by one of the county agents that has yielded at the rate of \$400.00 per acre. We have established plantings of raspberries in several sections of north Georgia and hope in time to develop a new berry industry in that locality.

The experimental work with sprays is being continued here at the College. We are testing some new spray compounds this season, as well as a new material for spreading spray mixture on plants. Along with this work we are again testing thirty varieties of tomatoes. Our work with Paradichlorobenzene last season proved effective, and we are now recommending its use against borers of peach trees on all trees five years old and older.

We have planted several varieties of pears this season, hoping that some of them will prove sufficiently resistant to the pear blight to enable us to re-establish the pear industry in this state, or at least to use them for breeding with that end in view. It is pleasing to note that in many instances commercial concerns and commercial growers have been more than willing to furnish us with plants and fertilizers for experimental purposes.

The instructional work in horticulture has been exceedingly satisfactory this past session. The upper classes in the Horticultural Division have increased over 100 per cent, and have become so large that it is difficult to find sufficient desk space and laboratory equipment. The experimental work conducted by the seniors has opened up several new fields and laid the foundation for further investigation at a future time. The interest of the students has

been shown in the reorganization of the Horticultural Club and the bringing to the College of an outside speaker at the expense of the students themselves. The prospects for the graduating of several specialists in Horticulture, not only this year, but next year, are exceedingly good.

The instructional work of the division is increasing at such a rate that the appointment of an additional instructor seems advisable. The continuity in the horticultural staff tends toward stable and satisfactory work. The past year has been satisfactory in every way.

### DIVISION OF POULTRY HUSBANDRY

Considerable construction and improvements have been completed during the year. The most important is the addition to the main building. This addition, which is 30x36 feet, gives two much needed class rooms and a spacious incubator cellar. The old cellar will be remodeled and used for laboratory room. The additional space has long been needed to handle the increased enrollment of students.

Four combination brooder and growing houses, each 8x12 feet, have been constructed. Six small combination setting and brood coops have been built and an open-air rabbit house with a capacity of eighty rabbits completed. Rehabilitation students planned and built a pedigree, variety breed house 50x10 feet. This house makes pedigree work more efficient, and at the same time makes it possible for us to add several new varieties for class work.

A large permanent incinerator has been constructed at the lower end of the plant. All dead birds, bad eggs or rubbish can be easily and sanitarily disposed of.

The laying flock has now reached a maximum for the limited acreage of the division. Seven hundred and twenty-five of the finest layers are now kept. This is an increase of two hundred over last year. The improvement in the quality of the birds is even greater in comparison than the number. During the last year considerable line breeding has been done to combine standard qualities with utility performances. That this line breeding has been successful is evident in our present breeding pens which show more good standard birds than we ever had before. Of the seven hundred twenty-five layers on the plant, over four hundred are being trap-nested.

To give students a better training and a broader field for judging, three new breeds or varieties have been added to the College flock. They are, viz., Black Minorcas, Silver Campines and Silver Penciled Wyandottes. While ten breeds and varieties are kept, only the four most popular ones are stressed, viz., White Leghorns, Barred Plymouth Rocks, Rhode Island Reds, and White Rocks.



The following heavy pen records were made in January: 29 Barred Plymouth Rocks layed 610 eggs, or 67 per cent; 34 Rhode Island Reds layed 691 eggs, or 66 per cent; 34 White Leghorns layed 687 eggs, or 65 per cent.

The above records prove without a doubt that winter eggs can be produced in Georgia.

An experiment with lights giving the birds a fourteen-hour day was carried on during the winter. In January, birds under lights layed 63 per cent, while birds not under lights showed only 39 per cent production. The value of the lights on a commercial plant cannot be over-estimated. By the use of lights, we were able to start hatching a month earlier than usual.

One of the outstanding helps to the state of Georgia by this division is the distribution of breeding stock, hatching eggs and baby chicks from the above stock at about half what commercial poultrymen would charge. During the year, we have sold 225 adult breeders, 8,700 baby chicks and 8,390 hatching eggs. Between January and May first orders for 30,000 baby chicks were turned down because of our inability to fill them. These orders were all from residents of Georgia.

During the year, 80 regular students, 336 rehabilitation men, and 11 short course students were given instruction. A total of 1,666 hours of lectures and 1,820 hours of laboratory instruction were given during the year. The above does not include instruction given to Boys' and Girls' Short Courses or County and Home Demonstration Agents. This sudden demand for poultry work shows that poultry keeping, as a business or side line, is being recognized and appreciated more than ever.

Poultry courses are becoming very popular with rehabilitation students. There are 76 men registered to specialize in this work. Six rehabilitation students are now operating their own plants successfully and one is superintendent of the College plant. Ten will complete their training and start their own plants within four months. Several good positions have been offered graduates, but they prefer operating their own places. It is interesting to note that we have students specializing in poultry from six states besides Georgia. All the incubation and part of the brooding this year has been done by rehabilitation men for practice work.

White eggs selected by students and exhibited by the Poultry Division at a recent show at Rutgers University won fourth prize. Because of the distance from the show, the eggs necessarily were somewhat old. Also we were competing in the white egg belt.

An experiment in raising pheasants is being conducted at present.

Hundreds of sick birds belonging to private individuals have been treated by the Poultry Division free of cost.

The cash receipts from over 719 layers during March and April amounted to \$1,960.00.

### Extension Work

Extension work was greatly curtailed last year when we were forced to withdraw our field agent because of lack of appropriations. The extension work since that time has been confined mostly to letter writing and the issuing of seasonable instructions to County Agents and Poultry Associations. Many counties have been visited by members of the teaching staff at the expense of the counties visited.

It is very evident that a County Poultry Breeders' Association is a great factor in stimulating and increasing poultry raising by lending its moral and financial support to all projects that will help to teach and encourage the keeping of more and better poultry.

Eight county auto tour parties have been entertained by demonstrations at the Poultry Plant.

During the year 2,284 letters have been written and 43 circular letters sent out. Current advice to poultry raisers has gone at least once a month and generally oftener. Two bulletins have been written and many plans and blue prints made and delivered upon request.

The following is a composite record of special work accomplished under our direction in 1921:

No. counties reporting poultry clubs-----	82
No. boys and girl members-----	2,842
No. adult members -----	1,248
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Total -----	4,090
No. of purebred eggs set, boys and girls-----	146,241
No. of purebred eggs set, adults-----	191,280
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Total boys, girls and adults-----	337,521
No. chicks hatched -----	212,683
No. baby chicks purchased -----	9,890
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Total purebred chicks -----	222,673

Below is the composite report from 52 of the 82 counties. Final reports from the other thirty counties have not been received at this office.

No. of demonstrators using incubators-----	613
No. of demonstrators using brooders-----	398
No. poultry houses built -----	317
No. poultry houses remodeled-----	506
No. self-feeders made -----	381
No. water fountains -----	413
No. candling lamps -----	481
No. trap-nests -----	60
No. standard egg cases-----	55
No. eggs sold collectively (30 doz. each)-----	660 cases
Amount gained by co-operative sales-----	2,677
No. of egg circles organized-----	60
No. of eggs preserved in water glass-----	3,100 doz.
Total value of all poultry produce sold-----	\$169,084
Total value of all products consumed at home--	95,501
Total value poultry and products in 52 counties	264,585

Spalding County Poultry Association is doing big things co-operatively. During March and April they sold three carloads of poultry and received much more than could otherwise have been received.

In summarizing the report, we are pleased to state that while we have been disappointed in some counties and with some projects, and our force is entirely inadequate, the results have been very gratifying indeed. It is interesting to state at this time that the club membership has increased from 1,371 in 1919 to 2,555 in 1920 and 4,090 in 1921.

### **DIVISION OF VETERINARY MEDICINE**

During the year 1921-1922, in addition to the work of the four-year degree course in Veterinary Medicine, there has been given a two-year course for the training of rehabilitation students for the position of "Lay Inspector" in the U. S. Bureau of Animal Industry.

The men enrolled in the classes for this course have shown great interest in the work and have made splendid progress. The opportunities for men trained along lines of sanitation and meat hygiene are so promising that the coming year will undoubtedly see a still greater number enrolled for this course.

New courses for the regular four-year and the one-year men in agriculture have been inaugurated. These courses are entitled "Zootechnics and Animal Hygiene." They deal with the age, soundness and utility of farm animals; with the communicable diseases of work stock and food-producing animals, particularly from the prophylactic point of view; and information and instruction regarding first aid for sick or injured animals is given.

These courses are valuable to the students who will become owners of live stock, for here they obtain information of use in the purchase and sale of animals; in the protection of their herds and flocks against the common animal plagues, and to care for them in case of their being affected with the common acute diseases or the common traumatic injuries.

Considerable new laboratory and museum equipment has been added. The hospital building has been undergoing extensive repairs. An additional one-story laboratory building is projected. The completion of this structure will enable us to vacate room needed by the department of surgery and will eliminate the objection to the present location of the anatomy laboratory made by the Committee on Intelligence and Education of the American Veterinary Medical Association.

The Veterinary Division needs additional space, particularly for laboratory classes, but this need will be adequately cared for with the completion of our Veterinary Building, which now seems assured in the relatively near future.

Additional equipment is sorely needed. The more pressing need

is the establishment of an ambulatory or out clinic. Filling this need will necessitate the employment of a teaching veterinarian who has had considerable experience in the practice of his profession and would also necessitate the purchase of an automobile to be used in carrying students on calls to be made in the territory surrounding Athens. An ambulatory clinic will enable us to treat a greater number and variety of cases than is now possible, thereby improving the training our junior and senior students are getting in the clinics and also widening our sphere of usefulness to the community. The ambulatory clinic should become self-sustaining in a few months.

During the past summer a survey of a number of permanent pastures in the southern and western portions of the state was made for the purpose of obtaining information as to the relation permanent pastures bear to internal parasitisms of animals under the climatic and soil conditions which exist in Georgia. This was a preliminary survey only, but the findings indicated very strongly that animals on permanent pastures in this state suffer no more from internal parasites than those on the permanent pastures of the colder and dryer sections of the country.

One bulletin has been issued. This deals with the slaughter of food animals and the care, cutting and curing of meats on the farm. From the great number of inquiries for information along these lines this bulletin should prove useful to the farmers of Georgia.

During the year the two members of the staff who do part-time extension work have written three hundred ten letters pertaining to the diseases of live stock; have visited fifty-six farms, making investigations or aiding in checking outbreaks of communicable diseases among animals; have consulted with eighteen county agents and twenty veterinarians; have addressed twenty-four meetings with a total attendance of 4,442; have vaccinated fourteen club pigs, and made one post mortem demonstration. The meetings of four scientific bodies have been attended. To perform this extension work necessitated the traveling of 3,518 miles by automobile and 4,422 miles by rail.

In the clinic of the division, 499 animals have been treated for a variety of diseases and surgical conditions, viz., seventy-four mules, seventy-five horses, one hundred twenty-eight cows, forty-three hogs, one hundred sixty-six dogs, three cats, seven rabbits, and two chickens.

#### **COLLEGE OF SCIENCE AND ENGINEERING**

In addition to the class room and laboratory work of the session, which has progressed with regularity and efficiency, the College of Science and Engineering has been active in behalf of the road problems of the state.

The road laboratory has made a large number of analyses and



reports on road soils, and has issued an important bulletin covering the results of its original research regarding Top Soil, Semi-Gravel, and Sand Clay roads which have proven so helpful to road progress in this and many other states.

Wide-spread interest has been attracted to these researches and their successful applications. Plans are in progress whereby the laboratory will undertake further systematic investigations on road materials on behalf of the Bureau of Public Roads and the State Highway Department.

Hon. John N. Holder, Chairman of the State Highway Board, has called attention to the need of a specialized school to train the supervisors and employees who have charge of the maintenance of the state roads. This large and important duty of caring for the entire state system demands a large force of skilled men whose intelligent performance of repairs on the highways means so much to the traveling public, and to the efficient expenditure of the road funds.

Mention is made of these matters to emphasize the immediate urgency that exists for additional quarters, laboratory space and instructors in the college of engineering to meet a situation for which its past experience has so well fitted it.

It would be most gratifying, if the suggestion of Chairman Holder in regard to providing a school for maintenance engineers could be met by the General Assembly. I know of no wiser act of the state at this time than to devote the sum of \$25,000.00 to the expansion of the college of engineering, in addition to its equipment and facilities, in giving it several new instructors, and thus enable it to do a larger work in its undergraduate instruction and in the particular field of qualifying men for efficient service as maintenance men on the state and county highways.

I earnestly commend this matter to the Board of Trustees. I regard the development of the College of Engineering as one of the most vital needs of the institution. My former reports have made this plain. I renew my emphasis and urgency of immediate effort in its behalf.

### DIVISION OF PUBLICATIONS

The work of this division has been greatly curtailed the past year, due to the decrease in the Smith-Lever appropriations. The demand for agricultural literature was unprecedented, and the supply of a number of popular bulletins was exhausted early in the year which made it impossible to supply the requests.

We were compelled to suspend publication of the "Extension News," which was very unfortunate. This was perhaps our best means of disseminating news and information of extension work in the state, and it is earnestly hoped that sufficient funds will be provided to enable us to resume the regular publication of this popular periodical the coming year.

The "Extension Special," which goes to members of the extension force in the field, was published regularly as in past years. The "Rehabilitation Bulletin," a new publication for rehabilitation men who have completed training at the College and are on their own farms now, is issued twice a month and carries timely information especially for their benefit. The Federal Board for Vocational Education has expressed its appreciation of this publication and of the interest the College is taking in the training of disabled ex-service men.

News articles have been prepared for the daily and weekly press of the state at intervals, and practically all the papers are glad to get this material. This is recognized as being one of the best means of reaching the people with news and information, and the editors are glad to pass it on through their columns for the benefit of their readers. This work will be stressed during the coming year.

It is hoped that the division can adopt a larger program of work during the coming year, as there is a great demand for information on agricultural subjects at this time.

Fifteen bulletins have been issued during the past year. A complete list of publications follows:

Title	No.		Total
	Pages	Copies	Pages
Pasture Soils for Georgia.....	8	15,000	120,000
Seed Selection on the Farm.....	16	10,000	160,000
Lowndes County Report .....	40	1,000	40,000
Extension Service Report .....	68	1,000	68,000
Sweet Potatoes, Harvesting & Marketing	12	5,000	60,000
Poultry House Construction.....	4	10,000	40,000
Annual Catalogue .....	112	4,000	448,000
Some Factors Affecting the Economic			
Production of Cotton .....	16	5,000	80,000
Soil Survey of Pierce County.....	36	1,000	36,000
Peanuts for the Piedmont.....	4	10,000	40,000
Cost of Tobacco Production.....	32	5,000	160,000
Breadmaking Contest .....	8	15,000	120,000
Annual Report District Schools.....	32	1,000	32,000
Club Girls' Guide .....	16	10,000	160,000
Annual Report of the President.....	112	1,000	112,000
Total .....	516	94,000	1,676,000

#### Circulars

What the College Offers the Youth			
of the State .....	8	3,000	24,000
Pictorial Review .....	4	4,000	16,000
Program for North Georgia.....	8	8,500	68,000
Program for South Georgia.....	8	7,500	60,000
Cotton Grading School Announcement..	4	2,500	10,000
Cotton Variety Tests .....	4	1,000	4,000
Total .....	36	26,500	182,000

## EDUCATIONAL EXHIBITS AND ILLUSTRATIONS

The demand for pictorial charts for visual instruction increases every year. Special charts are continually being made for extension specialists and other instructors.

A special bulletin on "Charts for Visual Instruction in Extension Work" was compiled by the Illustrator, setting forth the chart service rendered by the College and giving instructors in the technique of chart making, the bulletin being profusely illustrated.

This year thirty-four county agents in short courses at the College were given instruction and assisted in making their own charts, data and materials being furnished at the College.

Standard charts 28x42 inches were painted and printed on the following subjects: Agronomy: cotton, corn, pollinization, farm management, pastures, wheat, miscellaneous crops and Mendel's Law. Agricultural Chemistry: soil survey, soil building. Animal Husbandry: cheese, hogs, sheep, cuts of beef and pork. Clubs: girls' clubs, boys' clubs. Home Economics: food, house furnishing, nutrition and labor-saving devices. Horticulture; pruning, pomology, vegetable gardening, comparative yield of pecan varieties, and sap currents. Marketing: potatoes, poultry, butter, eggs, beef, cattle, hogs, corn, cotton. Poultry Husbandry: types of layers, grading eggs, producing winter eggs, feeding, feathers, toe punching, angle of tail carriage, comparison of American and foreign types. Veterinary Medicine: diseases of horses, obstetrics, anatomy, bacteriology.

Large charts and posters 42x72 and 54x94 inches were made for special lectures to large audiences, or for special exhibition purposes. Other miscellaneous work included long signs for exhibits at fairs, for special meetings, and for pageants; placards and posters of all kinds; colored conventional designs for containers for girls' clubs products; designs for diplomas; pen drawings for publications; mimeograph drawings; place cards painted; photographs tinted; and contests originated for entertainments.

Special charts were made for use of the instructors in rehabilitation work.

### Educational Exhibits

Signs, placards and pictorial charts and posters were made for girls' and boys' clubs exhibits shown at the Southeastern Fair in Atlanta, the Georgia State Fair in Macon, the Tri-State Fair in Savannah, the Chattahoochee Valley Fair in Columbus, the Georgia-Florida Fair in Valdosta and the Georgia-Carolina Fair in Augusta.

Similar illustrative material, and especially pictorial charts, was used as follows:

Marketing Conference, Athens.

"Little International," Livestock Show, Athens.

University Summer School, Athens.

Annual Conference of Negro Agents, Fort Valley.

Jeannes Workers, Fort Valley.  
Training School Teachers, Fort Valley.  
Summer Normal School, Valdosta.  
Georgia Educational Association, Columbus.  
Negroes' Georgia Educational Association, Columbus.  
Georgia State Bankers' Association, Atlanta.  
National Federation of State Farm Bureaus, Atlanta.  
American Association of Agricultural Colleges, New Orleans.  
State Meeting of Home Demonstration Agents, Lexington, Ky.

Also at state and local Parent-Teacher Associations, community fairs, school fairs, county fairs, high schools, county federations of Women's Clubs, and Teachers' Institutes in all parts of the state, and at meetings of Men's Clubs, Rotarians, Kiwanians, Civitans and Lions at Cordele, McDonough, Fitzgerald and Valdosta.

### LIBRARY

An effort is being made at all times to build up the library and make it adequate for every line of work of the College. According to the accession book, the total number of volumes now in the library is 4,406. An important addition to the reference department during the past year was the purchase of Nelson's Loose-Leaf Living Medicine, an encyclopedia in seven volumes.

Substantial additions to the bulletin list have been made. During the year 1,940 bulletins were received from the United States Department of Agriculture, colleges and experiment stations. These, together with the index cards which cover them, are filed in the library. A number of files of bulletins and magazines have been completed, 107 volumes having been bound during the year.

Duplicate sets of all bulletins, in unbound form, are kept as complete as possible for reference work, thus saving the bound volumes much wear. A collection of clippings upon the various activities of the College, and upon other valuable reference material, and catalogues of leading educational institutions of the country are kept on file.

Library activity, as in previous years, has been carried into the correspondence field. Numerous letters were sent from time to time in response to requests for information on debates, books, farm papers, and other agricultural publications.

Material on the following debates was compiled:

Resolved: That, the Government ownership of railroads would result to the best interests of the American farmer.

Resolved: That, the farmers of the South should adopt a system of co-operative marketing for cotton.

Resolved: That, the Government should develop and operate large, natural sources of power for the manufacture of nitrates.

Resolved: That, the United States Government should establish Rural Credit Societies on the principles of the Kenyon-McFadden Bill.

Bibliographical material on the following subjects was prepared:



Boll weevil problem, concrete construction, co-operative associations, co-operative marketing of livestock, country planning, the handling of livestock at public stockyards, history of agriculture in the United States, nutrition, plays and games, rural organization.

In summarizing the activities for the fiscal year 1921-1922, we find that an unusual amount of assigned reference work has been done by the students, and while the most important services of the library cannot be measured by statistics, a few of these may be of interest. 2,548 books, 539 bulletins, and 498 magazines were loaned for home use, the use of books in the library not being recorded.

The library receives regularly about one hundred newspapers of the state, the county paper collection being one of the features of the library much appreciated by the students. The reading room is also provided with about one hundred fifty other publications, agricultural, scientific, technical, and some popular magazines. Some of these are obtained without cost, through the courtesy of the publishers.

The wooden cases in the stack room are being replaced with steel stacks, thereby doubling the shelving capacity, and the reading room is being refurnished with standardized library tables and chairs. This improvement will add greatly to the working facilities of the library, as well as to the convenience of the faculty and the students.

## THE CAMPUS

As seasons go by the campus of the College of Agriculture becomes much more attractive and interesting. The collection of plants is annually increasing. Those already set are developing into maturity and perfection. There is hardly an asset of the institution that calls forth more favorable criticism and attracts more attention than does the campus.

Its increasing size entails more work annually, because the standard of perfection which was set in the beginning must be maintained, and, as each season's growth brings in more area, the campus is constantly growing larger and demands more care and more attention.

The plantings in the open-air theatre and around the Woman's Building survived the serious drouth of 1921 and are all now thriving. Additional plantings have been made around the new Animal Husbandry building and in the triangle in front of the original barns. These plantings will add greatly to the attractiveness of this portion of the campus. The planting about the Animal Husbandry Building proper will be completed as soon as the building itself has been finished and made ready for use.

Plans and preparations have been made for the establishment of a water garden on the river drive. The pond has been made, but as yet we have not been able to introduce the desired plants. Arrangements have been perfected with parties in the Okefenokee Swamp to furnish us with the various species of water plants found in that vast area as soon as the pond is in a position to receive the same. This work cannot be brought to completion until the winter of 1922.

It is felt that the addition of this water garden to the campus will be of great advantage along botanical lines, as heretofore there was no available place for the growth of water-loving plants. Little by little, the flora of the state is being collected and established about the campus. Were it possible to get some financial assistance, a botanical garden well worthy of the name could soon be brought into being.

The flora of Georgia is varied and little study has been given it. A great monument could be developed in the building and establishing of an arboretum and botanical garden about this institution. It is from such centers of learning that studies and publications should emanate, and at this time there is a most fertile field to be found in the flora of this state.

Not only from a scientific standpoint, but practical as well, is the campus becoming valuable. The frequent inquiry of visitors regarding the plants and shrubs, and their adaptability and serviceability show that the people of this state are becoming more and more interested in landscape gardening and the improvement of homes and communities.

The only planting on the place that is not doing well is that of the Lombardy poplars on the main driveway from the back of the Main building. These trees have reached maturity and in many instances are going down. They will not, however, be a serious loss when they are taken out as the planting in the open air theatre and the arboretum near them will soon take their places and, as a matter of fact, they were originally planted with a knowledge that after some ten or twelve years they would have to be removed.

The removal of the power house still seems to be a thing of the future, greatly to be desired and hoped for. The present accommodations are hardly large enough to supply sufficient heat for the institution at present. With the addition of one or two more buildings the present power house will most assuredly have to be enlarged. In its present position it is unattractive and unsightly. Its removal will be the greatest improvement that could be made to the campus.

## ROADS AND DRIVES

No road construction has been done this past season. The filling of the ditches along the main drive from Lumpkin Street has

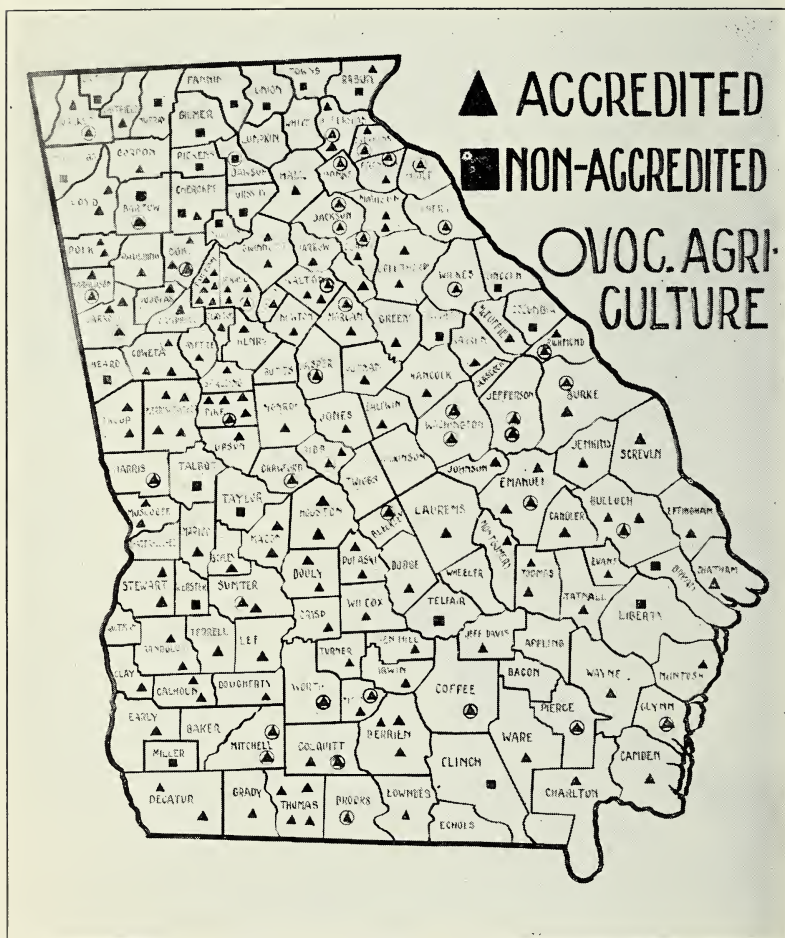


*The Winterville High School, used by the Division of Agricultural Education as practice school for training teachers of Agriculture.*



*Lumpkin Hall, equipped with class rooms and laboratories for training high school teachers of Agriculture.*





*The demand for high school teachers of Agriculture is rapidly increasing.*



been one of the best pieces of work done on the roads and drives. In a good many places new drainage arrangements have been made and considerable top soil has been used in keeping up and improving certain pieces of road. The roads are getting harder usage annually. The number of automobiles that are parked about the College daily speak for the increase in the student body and the greater use of the highways. During the extremely wet weather of the past spring, considerable trouble was experienced in keeping the roads in condition. I am glad to say now, however, that they are in good shape.

There are now more than ten miles of roads on the College property, and many people spend their holidays in walking and driving over the farm and through the campus. The trees that were planted last year along the roads are doing well and little by little, vistas and views are being opened and improved. The College property is practically a park, but, unfortunately, it is a park without the proper police protection.

For several years past, efforts have been made to get the city and the county to give police protection to the campus and the roads, both night and day, but up to the present time little success has been attained along this line. In its efforts to protect its plants and flowers, the College has gone so far as to hire special officers to patrol the property but, unfortunately, these officers were not clothed with the proper authority and their presence was almost useless. All public parks have the proper police supervision.

It would be most desirable if arrangements could be made with the city of Athens, and possibly with Clarke County, whereby officers could be assigned to the campus of the College of Agriculture so that the same could be freely used by the inhabitants of the city and yet have the plants and shrubs protected.

### ORCHARDS, GARDENS AND NURSERY

The young peach orchard is doing exceedingly well. This orchard was planted by the Freshman class some four years ago and is one of the most uniform and attractive small orchards in the state. This season it will produce its first real crop and the prospects are that it will be an exceedingly fine one. It is being used at the present time as a laboratory for teaching the Rehabilitation students spraying and orchard management. The original planting of peaches has disappeared. It was removed and in its place there has been raised this year a combination crop of Fulghum oats, crimson clover and hairy vetch, making a most excellent hay.

The old vineyard will be removed at the end of this season and the ground cultivated. A new one has been established on the southeast slope at the southern end of the old apple orchard.

The young apple trees are doing exceedingly well. We are grow-

ing them in alfalfa, not that we think this should be the practice, but we are studying blight control in relation to apples and hope that this method of culture may give us some results. The production of grain and feed stuffs for the campus work stock has been ample for the past year.

Unfortunately, the returns from the gardens and the greenhouses for the past year have not been up to the standard. Two years ago over \$5,000.00 was turned in from these departments. This year the sum is approximately \$2,500.00, or fifty per cent of the highwater mark in 1920. This lack of funds has hampered the development to some extent. The greenhouses are being run to capacity as heretofore. Some rearrangements have been made and the central house has been turned into a conservatory.

The nurseries have proven an asset to the division. During the past year numbers of plants have been disposed of and likewise many hundreds of cuttings set in order that the nurseries might be kept up. To a certain extent these nurseries have been extended and additions have been made to them in the way of new plants and new shrubs. They are now in good shape and the stock of plants is on the increase. They have furnished all of the plants that have been set about the campus during the past two years. Had the College been forced to purchase these plants, the expense would have been prohibitive.

The use of the orchards, nurseries and gardens as a laboratory is increasing. The number of students now in the horticultural division so overcrowd the greenhouse that it is hard to handle them therein. Likewise the individual student garden has had to be given up for a general garden of an acre or more in extent. Were land convenient and available, the continuation of the individual student garden would be most advisable. It is hoped that in some way and at some time this custom may be re-established.

### EXPERIMENTAL PLATS

To continue the study of strains of alfalfa, a collection of seed is being made for planting in the fall. These seed have been secured largely from Nebraska and Kansas and other western states. It is somewhat difficult to find men who have been doing any considerable amount of improvement work, and especially those who have been selecting the type of seed desired here.

The second year of trial with bur clovers showed only three of the large plats still promising. These are the common bur, the button clover, and the one with spineless burs. Two of the yellow-flowering sweet clovers are showing a good deal of promise, and these with the more promising of the bur clovers will be transferred to the pasture this fall.

The experiments in seeding crimson clover (unhulled) on Bermuda grass sod were continued in the fall of 1921. Three dates

of seeding, August, September, and October, were made, the September seeding giving again this year, as it did last, a better stand. Crimson clover will be tried also on an orchard grass pasture this fall. This method of increasing pasturage is one of the most economical which has been found, except the bur clovers.

The five-year average of the soy beans that have been grown on the demonstration field shows that the Laredo bean leads in hay production, with a yield of 2.23 tons per acre, as compared with a yield of 1.5 tons by the Mammoth Yellow, and that soy bean No. 37250 leads in grain production, with a yield of twenty-three bushels to the acre. These are the two outstanding beans and should prove of great value to the state.

Trials to determine how early soy beans may be planted were started this spring. The earliest planting was made on March fifteenth, and the indications are that plantings may be made even earlier. If some of the early and medium early beans can be planted at this time, without extending their growing period too much, a grain crop for hog grazing can be produced for mid-summer, which will enable the farmers to get their hogs on the market before the drop in prices in the fall. With this early planting in view, three of the outstanding soy beans for the northern states were added to the variety tests.

Three years ago one of the worst eroded ranges of the demonstration field was planted to Kudzu. No crop was taken off the first year, and everything possible was done to develop a stand. The second year some grazing tests were made, which showed a very high carrying capacity. The third year the crop was cut for hay and the plat plowed. In the fall of 1921, this plat was seeded to alfalfa and an excellent stand resulted. Evidently Kudzu has wide usefulness in Georgia in bringing back into cultivation eroded and galled lands.

Work on Foster and Meade cottons, on the same basis as that of College No. 1, was undertaken this spring. As the three varieties could not be grown on the demonstration field, this work was made possible by co-operation with Denmark Hall farm.

### COLLEGE FARM

The work of building up the soil fertility and establishing a herd, flock and stud of high class animals on a worn and nearly abandoned farm has been one of the most important undertakings attempted by the College. But very little funds have been available and this has necessitated observing strict economy, and the employment of careful business methods.

The changes that have taken place, and the results accomplished during the past fifteen years are but little short of miraculous. It is conservative to state that practically every acre of land in cultivation on the farm will produce three times as much as it would

have in the beginning. The farm is a laboratory, in the broadest sense of the word, in which the truths and principles of scientific agriculture are applied to practical problems, and each year this work becomes of more and more value to the students of the Agricultural College and the increasing number of farmers who visit the institution from time to time. Like other branches of the institution, the greatest profit derived from the farm is its value in demonstrating the truths of agriculture.

The flock of Southdown sheep added to the farm last year has given most satisfactory results, and has proven a source of interest and value in teaching sheep raising, judging and breeding, feeding and management of sheep.

Since the farm is run principally for educational purposes ten distinct breeds of pure bred livestock are maintained for comparative purposes. This entails a much greater expense than would occur on a commercial stock farm. The animals are used extensively in class work, which militates against the most economical production, but in spite of this it is gratifying to note that such careful business methods have been applied that each year the farm showed a small net profit. The receipts for the fiscal year just ended amounted to \$18,417.67, including \$2,455.56 worth of cotton on hand June 1st with a net profit of \$1,729.19. The total receipts for the dairy herd for the year 1921-22 amounted to \$11,346.94. The accompanying table showing the receipts for the College farm for a period of fifteen years indicates wonderful progress in the financial returns to be anticipated from stock farming with a very small portion of the land devoted to cotton production.



# RECEIPTS FROM COLLEGE FARM

Fiscal Year	Dairy	Sale of Live-stock	Sale of Cotton and Cotton Seed	Total Receipts	Per Cent Increase Total Receipts	% of Total Receipts	
						Dairy	Live Cotton Stock
June 1, 1907-1908-	\$ 1,124.44	\$ 78.29	\$ 469.62	\$ 1,799.37	----	62.5	4.
June 1, 1908-1909-	2,891.40	241.52	848.75	5,239.42	191.1	74.2	6.2
June 1, 1909-1910-	4,331.02	319.90	1,821.82	6,709.92	28.0	64.6	4.7
June 1, 1910-1911-	4,346.87	762.51	1,779.95	7,149.58	6.5	60.7	10.6
June 1, 1911-1912-	5,099.44	1,846.23	1,421.14	8,581.41	20.0	59.4	21.5
June 1, 1912-1913-	5,675.46	1,520.20	1,113.45	8,581.53	----	66.1	17.6
June 1, 1913-1914-	6,026.57	2,667.61	1,623.26	10,335.45	20.0	58.4	25.8
June 1, 1914-1915-	6,562.60	2,791.57	687.73	10,173.60	1.5	64.5	26.4
June 1, 1915-1916-	6,700.41	3,056.02	1,043.93	11,008.69	9.14	60.9	27.8
June 1, 1916-1917-	7,392.04	4,313.75	1,359.59	13,249.18	21.32	55.4	32.3
June 1, 1917-1918-	10,750.34	3,051.90	1,771.02	15,826.62	18.48	67.9	19.3
June 1, 1918-1919-	13,686.09	4,094.59	2,439.55	21,076.47	33.11	64.9	22.2
June 1, 1919-1920-	18,651.45	5,838.80	4,145.11	29,265.23	27.9	63.7	19.9
June 1, 1920-1921-	16,956.91	1,291.37	309.00	19,034.28	----	89.0	6.8
June 1, 1921-1922-	11,346.94	3,788.85	726.22	15,962.11	----	71.0	2.3
Total Sales - - -	\$121,541.98	\$ 35,663.11	\$ 21,560.14	\$183,992.86	----	----	----
Increase in 15 years	\$ 10,222.50	\$ 3,710.56	\$ 256.60	\$ 14,162.74	----	----	----

For the fiscal year ending June 1st, 1908, the total receipts from all sources amounted to \$1,799.37. During the past fifteen years a considerable proportion of land formerly in the farm has been taken over by other divisions, but with a reduced acreage the returns are now more than ten times what they were for the entire farm property owned by the College.

Since the farm is more than self-supporting, and is of such vital importance in teaching, it is hoped that funds will be available for improving the quality of the breeds now maintained and for adding other breeds of importance in the southeast in the near future.

From the very beginning most of the land in the College farm was devoted to the production of forage crops, feed crops and pasturage. Since the boll weevil has completely infested the state the wisdom of this policy is apparent to all. The acreage devoted to the various crops for the year 1921-22 is as follows:

Corn -----	60	acres
Silage -----	40	acres
Oats -----	55	acres
Winter hay -----	20	acres
Cotton -----	20	acres
Rye -----	15	acres
Alfalfa -----	36.5	acres
Improved pasturage -----	5	acres
Total -----	251.5	acres

Approximately ninety acres of peas and sorghum will be planted for hay after the winter cover crops have been harvested. This will make a total of 341.5 acres actually cropped during the year. In addition to this 127 acres are used for pasturage. A systematic effort will be made during the present year to improve these pastures so as to make them provide a longer grazing season and a greater carrying capacity.

### Livestock

In spite of the financial depression the sale of livestock has been very satisfactory during the past year, and it is gratifying to note that these sales amounted to \$3,788.85. This is an increase of \$2,497.48 in the amount of sales of livestock over last year. It indicates that the farmers are determined to fight the boll weevil with livestock.

The inventory value of all livestock owned by the College fifteen years ago was \$1,917.00. The present valuation is \$16,696.00. This increased valuation is all the more gratifying when it is remembered that the sales of livestock have amounted to a great deal more than the money expended for the purchase of livestock, and that the herds have been maintained at a modest profit during the entire fifteen years.

At the present time the Holstein herd consists of twenty-five animals. The Jersey herd numbers thirty-nine animals. There are

eight Guernseys on the farm. The Hereford herd numbers sixteen and the Shorthorn herd thirteen head. In addition to this, two grade cattle are kept. There are fourteen Southdown sheep. Nineteen Poland-China hogs and four Berkshires. There are twenty horses and mules on the College farm. This makes a total of one hundred and sixty animals maintained on June 1st. Of this entire lot one hundred and forty-five are pure bred and registered.

### Livestock Statement

Value of livestock on College farm September 1, 1907--	\$ 1,917.00	
Expenditure for purchase of livestock from September 1, 1907 to June 1, 1922 -----	15,829.39	
Value of livestock June 1, 1922-----	\$16,696.00	
Sale of livestock from September 1, 1907 to June 1, 1922 -----	36,357.21	
Net increase value plus sales above expenditures for purchasing livestock -----		35,306.82
	\$53,053.21	\$53,053.21

### Sales Exceed Purchases

Average amount expended yearly for purchase of livestock	\$1,055.29
Average annual sales -----	2,423.81
Average net yearly increase in inventoried value of livestock -----	985.27

Attention is directed to the fact that during the past fifteen years a total expenditure of \$15,829.39 has been made for purchasing breeding stock. This is an annual expenditure of \$1,055.29. The total sales during these fifteen years amounted to \$36,357.21, or an average yearly sale of \$2,423.81. It will be seen from this that the average sale of livestock is nearly two and a half times the amount expended for the purchases of breeding stock. In addition to the sales there has been an average net yearly increase in the inventory value of the livestock of \$985.27.

The following table shows the number and value of livestock maintained, and the value by years. The decreased valuation is due to general deflation in prices:

### Value of Livestock

Fiscal Year	Value	Number	Per Cent Increase in Value
September 1, 1907 - - - - -	\$ 1,917.00	42	
1908-1909 - - - - -	5,082.50	71	165.1
1909-1910 - - - - -	6,937.50	132	36.5
1910-1911 - - - - -	10,042.00	213	44.7
1911-1912 - - - - -	10,265.00	159	2.2
1912-1913 - - - - -	12,005.00	167	16.9
1913-1914 - - - - -	13,580.00	170	13.1
1914-1915 - - - - -	14,532.00	163	7.0
1915-1916 - - - - -	17,310.00	145	19.1
1916-1917 - - - - -	19,870.00	146	14.8
1917-1918 - - - - -	21,554.00	181	8.4
1918-1919 - - - - -	22,467.50	192	4.23
1919-1920 - - - - -	26,727.50	155	16.4
1920-1921 - - - - -	21,727.50	186	—18.
1921-1922 - - - - -	16,696.00	160	—22.
Total increase for 15 years	\$14,779.00	118	1,186.00

### Receipts from the Dairy Herd

With the deflation in values, it was found necessary to reduce the retail selling price of milk from twenty-five cents to twenty cents per quart. With the financial depression families have shown a disposition to economize in the purchase of milk. These facts have been reflected in the total receipts from the dairy herd. The accompanying table shows the receipts from the dairy herd by years since the establishment of the Agricultural College, the number of cows maintained and the average gross return per cow. It is gratifying to note that in the beginning the cows in the herd returned an average of \$86.49 per cow, and that last year the average returns per cow was \$343.82.

#### Dairy Receipts

Fiscal Year	Total Receipts	No. Cows	Return Per Cow
June 1, 1907-1908 - - -	\$ 1,124.44	13	\$ 86.49
June 1, 1908-1909 - - -	3,891.40	30	129.71
June 1, 1909-1910 - - -	4,331.02	30	144.37
June 1, 1910-1911 - - -	4,346.87	30	144.89
June 1, 1911-1912 - - -	5,099.44	32	159.35
June 1, 1912-1913 - - -	5,675.46	32	177.36
June 1, 1913-1914 - - -	6,036.57	34	177.53
June 1, 1914-1915 - - -	6,562.60	34	193.01
June 1, 1915-1916 - - -	6,700.00	35	191.44
June 1, 1916-1917 - - -	7,392.04	36	205.33
June 1, 1917-1918 - - -	10,750.34	40	271.26
June 1, 1918-1919 - - -	13,686.09	40	342.15
June 1, 1919-1920 - - -	18,651.45	42	444.08
June 1, 1920-1921 - - -	16,956.91	41	413.58
June 1, 1921-1922 - - -	11,346.94	33	343.82
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Total increase 15 years -	\$10,222.50	20	257.82

The total receipts from the sale of milk and cream amounted to \$11,346.94, and shows a net profit of \$3,072.66.

### ADMINISTRATIVE OFFICE

The executive office has considered and dealt with the various problems affecting the welfare of the institution as best it could under the existing circumstances. An endeavor has always been made to consult and advise with the Trustees concerning all matters affecting the growth and welfare of the College, and to be guided in all matters by the advice received through the agency of the Board of Trustees.

The limited finances at the command of the College have made the successful administration of its work very difficult at times. The policy has always been, as one friend has kindly said, to "keep on smiling and working." This is both sage and timely advice and has proven to be a most helpful motto to follow.

You will see from this report that the duties and responsibilities of this office continue to increase, and that the College is reaching out and serving an ever-enlarging constituency. It may be said



in effect that it indeed has the state for a campus, and we are not without generous evidences to show that the efforts which are being put forth to advance the basic industry of the state are widely appreciated.

There seems to be a feeling that the College is a representative institution which bases its conclusions on scientific facts and is motivated solely by the purpose to serve. As a result there is a disposition to lean more heavily than ever on its advice and to call upon our specialists, field workers, and county agents for assistance in the solution of the many new problems by which our farmers are confronted. There is much still to be accomplished, but further expansion seems now out of the question until there is a specific increase in the funds set aside for teaching, research work, and field activities.

There is still so much wasted effort in evidence, and the average farmer still enjoys so small a labor income that it seems wholly desirable that a sufficient increment be added to our present income to make possible the rapid and consistent expansion of our work along all the lines indicated above.

Addresses were delivered before the following organizations: The Association of Land-Grant Colleges, in New Orleans, on "Some Factors Affecting the Economic Production of Cotton;" The Georgia Farm Bureau Federation, in Atlanta, on "The Crisis in Southern Agriculture and How to Meet It;" The Southern Forestry Congress, in Atlanta, on "The Farm Forest as a Public Asset;" the Market Conference, held at the College in January, on "The Market Situation."

A paper on "The Economic Situation" was prepared for the meeting of the Arkansas Bankers' Association in Hot Springs. Addresses were also delivered before the Southeastern Fair School, Atlanta; University Summer School, Athens; Chamber of Commerce, Macon; Georgia Swine Growers' Association, Atlanta; Chamber of Commerce, Atlanta; Country Bankers' Association, Atlanta; Georgia Association, Atlanta; Georgia Swine Swine Growers' Association, Ashburn; District Agricultural School, Monroe; Georgia Forestry Conference, Macon; and before groups of farmers, fairs and other gatherings at Fitzgerald, Hephzibah, Macon, Greenville, S. C., Monroe, Trion, Statesboro, Augusta, and Folkston.

In response to a request from the Macon Chamber of Commerce, an agricultural survey was made of the thirty counties surrounding Macon, and a report rendered thereon. At the request of the U. S. Bureau of Education, assistance was rendered in making an educational survey of the State of Arkansas, and a report prepared. In addition to the survey, addresses were delivered in Arkansas before the Rotary Club in Little Rock, and at the district agricultural schools located at Monticello, Magnolia, Russellville and Jonesboro.

Special sets of charts dealing with "An Agricultural Program for Georgia," "Phases of the Marketing Situation," and "Technical Education" were formulated and prepared for the use of the College and extension workers.

### THE TREASURER'S REPORT

Addendum A, which is attached to this report, gives a detailed statement of our financial status. The Treasurer has accounted for each appropriation in a distinctive manner. The funds, of course, have been distributed through the medium of the formal budget set up and approved at the annual meeting of the Board of Trustees in June of each year.

Where changes have been made in the budget they have been approved by the Executive Committee. The Executive Committee has held several meetings during the year for this purpose. All the funds of the College have been disbursed, in accordance with the law, through the treasurer's office on a form of voucher check approved by you as Trustees. Duplicate itemized bills are on file in the treasurer's office covering all expenditures.

In reporting the funds received under the Smith-Lever Act we have complied with the rules and regulations prescribed by you and the States Relations Office of the U. S. Department of Agriculture, under whose authority we carry forward all the projects associated with our extension work.

The state extension funds are still being expended so as to secure the largest possible offset from Federal sources. No doubt you recall that the Secretary of Agriculture is authorized by Congress from time to time to expend considerable sums of money appropriated through the various Bureaus of the U. S. Department of Agriculture in co-operation with the several states.

We have been fortunate up to the present time in securing favorable consideration from the office of the Secretary relative to the endowment of co-operative projects carried forward along various lines. Our state extension work, as distinguished from the State Smith-Lever work, is closely associated with that of the U. S. Department of Agriculture, and has been conducted in accordance with the Memorandum of Agreement signed on behalf of the College by your direction and the Secretary of Agriculture June 14, 1915.

In addition to the detailed financial statement prepared by Mr. T. W. Reed, a special pamphlet is prepared each year and distributed for the information of the Legislature by Hon. Henry D. McDaniel, Chairman of the Board of Trustees. This pamphlet gives such information, as the laws of the state require, relative to our finances as may not have been included in the Treasurer's report.

The books of our Treasurer are audited twice a year; once by the State Board of Education and therefore has headquarters in

Atlanta. The present Auditor is Hon. Thomas Wisdom. He has made the usual thorough examination of our books, and his certification relative thereto is attached to Addendum A.

In addition to the above, all funds from state and federal sources and used in association with our extension work are subject to an annual inspection by auditors sent out from the States Relations Office of the U. S. Department of Agriculture in Washington. This audit is generally made by two men. The Federal fiscal year does not end until July 1st, so the accounts have not been examined for the year 1921-1922, but the certificate of examination for 1921, which has not been previously officially recorded, is attached for your information to Addendum A.

The institution is operated on the budget system and a most careful and elaborate system of records is maintained. All purchases are made on requisition. All bills must be rendered in duplicate and approved in this office before being sent to the Treasurer for payment. Traveling expense bills are all itemized and detailed and the cancelled voucher representing the payment of each bill is attached thereto and kept in the files in the Treasurer's office. Our business system has been complimented on a number of occasions where inspections of our records have been made by local state or federal authorities. Our records are open to inspection and we court advice and suggestions on how to improve and make the present system more economical and efficient.

#### Inventory

Land -----	\$ 498,000.00
Main Building -----	200,000.00
Power House, including heating plant, light, water, plumbing, sewage, gas and sidewalks-----	33,250.00
Division of Agronomy, including barns, tools and demonstration field equipment -----	25,432.00
Photographic room equipment -----	300.00
Division of Forestry -----	4,650.00
Division of Horticulture, including barns, tools and other equipment -----	26,067.00
Extension equipment and exhibit cases-----	15,353.00
Division of Agricultural Chemistry, including soil laboratory -----	7,547.00
Division of Agricultural Engineering, including lab- oratory -----	86,108.00
Division of Veterinary Medicine, including hospital--	20,568.00
Division of Poultry Husbandry, including buildings--	24,280.00
Division of Home Economics-----	11,500.00
Division of Agricultural Education, including build- ings and equipment -----	15,335.00
Library -----	9,309.00
Division of Animal Husbandry, including creamery--	19,989.00
Live Stock on farm-----	16,696.00
Farm buildings, barns, and tenant houses-----	26,868.00
Tools and implements -----	4,231.00
Woman's Building -----	100,000.00
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	\$1,155,483.00

The usual inventory has been prepared on the basis of present values. It approximates that of last year. The present value of the property under your charge has been conservatively estimated at \$1,155,483.00. This represents an increase of \$18,354.75 over last year. While the property is in fairly good condition, much repair work needs to be done. Unless provision is promptly made to this end, serious deterioration is bound to follow. We certainly need a special appropriation to cover repairs and alterations. It is manifestly impossible for an institution of this size, and with such a large number of buildings under its charge to keep the plant in good condition out of the meager maintenance fund which is now available.

The roads and fences have been kept in fairly satisfactory condition. The roadways have been maintained and improved in some respects. This has been made possible through the active and sympathetic assistance we have received from the Commissioners of Roads and Revenues of Clarke County.

The needs of the College were never more urgent. Since 1906 only \$110,000.00 has been appropriated for the construction of new buildings. The state has not invested as much in this institution, if the funds set aside for buildings and for maintenance be added together, as the present inventory value of its property represents. It is quite remarkable that this institution should have rendered such efficient service to the state for the last 15 years and could still be disposed of at a profit, even when every item of investment made by the commonwealth has been taken into consideration.

Attention has already been directed to the over-crowded condition of our class rooms and laboratories. If this condition has pertained in the past, what of the future, now that the high schools of the state are turning out approximately 6,000 graduates a year? Enough applications have been received for the freshman class alone to completely occupy all of the time of our present staff of instructors and fill up to overflowing every class room and laboratory we now possess. The high schools will turn out the largest number of graduates in their history next year. Where are they to go to college? Shall they be provided with the facilities at home, or shall they go elsewhere? Would this be a desirable policy for the state to follow? Is Georgia to be a high school state or a collegiate state? Are we to have our leaders educated elsewhere or here at home?

It is said by all who have given consideration to the present needs of humanity that we lack leadership along religious, humanitarian, commercial, industrial, agricultural, and economic lines. If that be the conclusion of our wisest and most capacitated leaders, what is to happen in the future unless we are able to develop, through the medium of our educational institutions, those savants



needed to supervise and direct our industrial, economic and social affairs, and stabilize and rationalize the growth and development of our country along all lines? These are some of the problems to which the state must give immediate consideration so that the future of society and cultivation may be properly safeguarded.

### HOW OTHER STATES VIEW THE PROBLEM

The Bureau of Education of the Department of the Interior at Washington has recently issued a pamphlet, bulletin No. 3 for 1921, in which the statistics of the state universities and state colleges are set forth in considerable detail. This pamphlet shows, for instance, that the buildings of the Connecticut Agricultural College, one of the smallest states in the Union, are valued at \$2,102,984.00. The buildings of the Michigan Agricultural College are valued at \$1,300,000.00.

The total working income of the Connecticut Agricultural College, aside from an appropriation for current expenses of \$80,000.00 a year, was \$851,156.00. The working income of the Michigan Agricultural College was \$1,798,926.00. Compare this with the \$80,000.00 now available for the maintenance of the work of this institution, and the disparity of our resources becomes immediately evident.

The states in question have not as large an investment in agriculture, nor does the agricultural wealth created by their farmers annually approximate that of Georgia.

These are but citations to illustrate our urgent need for an enlarged income if we are to keep abreast of the times in matters pertaining to agricultural education, and afford our people a desirable degree of leadership along these lines.

North Carolina has endowed agricultural and technical education most liberally. Tennessee has done the same thing, the income of her State University now approximating \$1,000,000.00. South Carolina, Florida, Alabama, Mississippi, Arkansas and Texas have all dealt most generously with their colleges of agriculture and mechanic arts. Louisiana has provided a fund of \$5,000,000.00 for the construction of buildings, and an income of a million dollars a year for the support of her State University. The income of the Georgia State College of Agriculture per student is lower than that of any other similar institution.

These facts are cited for your information and as an evidence of the liberality with which higher education has been considered and endowed in sister states. We cannot hope to keep in line with the progress made elsewhere without a material enlargement of our funds and a substantial development of our plant.

### INCREASED MAINTENANCE ESSENTIAL

A most careful examination of the needs of the institution makes it evident that a minimum maintenance of \$125,000.00 a year is

now essential. It would not be possible, even were these funds in hand, to establish several new divisions which should be created in order that the College may function properly and serve its constituency successfully. We must enlarge our facilities for instruction in Veterinary Science, if we are to continue the work of this division on a satisfactory basis.

It will cost \$50,000.00 to complete the Veterinary Science laboratory already begun, and at least two additional instructors are needed in order to meet the teaching requirements imposed upon us by the Federal Department of Agriculture. The men selected for these positions must be experienced teachers, who can command good salaries. The departments assigned them must be adequately equipped and supported. This would call for an outlay of at least \$8,000.00 to \$10,000.00 a year.

The State Vocational Board is asking us to take over the salaries of certain instructors and enlarge our efforts along the lines of agricultural education and home economics. It would take \$10,000.00 a year to effect the changes which seem to be imperative and which we have no way of meeting save through a substantial increase in our maintenance fund.

There is not a division of the institution which is not in need of at least one instructor in order to care for the present student body satisfactorily. The upkeep of our laboratories is a much more expensive undertaking than it was a few years ago. In spite of the depression which has prevailed, the cost of collegiate supplies is now mounting rather than declining. Much of the equipment we now possess has been in use for ten to fifteen years. A considerable amount of it must be replaced from year to year, and it will take several thousand dollars annually for this purpose.

It is easy to see, therefore, that it will take a minimum of \$125,000.00 to maintain our present force in effect, that it will take \$150,000.00 a year to permit of the establishment of any new divisions, provide for the replacement of worn-out equipment, and accede to the requests made upon us by the U. S. Department of Agriculture with reference to the Veterinary Division, and the Vocational Board with reference to the work which they have in charge.

This institution is in position to organize and conduct research along lines of the greatest economic importance to the state. If we do not create a thirst for knowledge in the minds of our students there is something fundamentally wrong with our courses of instruction. There are several hundred young men and women already enrolled and possessed of inquiring minds, who are capable of conducting research and so bringing to light fundamental truths of the utmost importance to the state and upon the elucidation of which its future progress and development rests.

Surely it is only reasonable that we should expect an endowment of \$50,000.00 for this purpose. It cannot be that a small state like Connecticut, where the agricultural interest is of minor importance and the industrial development of paramount concern, would spend so much on its Agricultural College unless it felt that it was securing a justifiable return therefrom.

In the great industrial state of Massachusetts a most liberal endowment of agricultural education has been provided for, because, as one great industrial leader with whom I talked has said, "Massachusetts must undertake to feed herself as largely as possible from her own soils. We cannot afford to be so completely dependent upon other sources of supply for our essential food needs as we have been in the past. There are certain perishable foods which we can grow cheaper here at home, and which it is essential for us to have in a generous abundance." If industrial states find it necessary to so liberally endow agricultural education, what is the lesson for states where agriculture constitutes the paramount business of the people, and an industry which as yet occupies a relatively minor position?

### PROVIDING THE NECESSARY FUNDS

How shall the needs of our institutions of higher learning be provided for? This is a pertinent question, and may be answered in one of several ways. Various states have worked out and adopted different policies which seem to meet the ends in view satisfactorily. In some states a mill tax has been established, and this seems to be a wholly desirable practice, because as the wealth of the state increases there is a sufficient increment accruing to the several institutions from year to year to provide for their continued growth and development. With the assurance of a steadfast and increasing income the Trustees can formulate a thoroughly constructive plan of action and satisfactorily anticipate the needs of the institution as they arise.

Another means by which an adequate income has been provided in many states is through the setting aside of a definite proportion of the state's revenues. There is no objection to this plan of action if it is deemed the wisest. In various states a severance tax upon resources is found desirable. This tax has never yet proved burdensome. In fact, it seems a highly desirable way of raising a revenue for the purpose of supporting higher education. It is only right and fair that as the natural resources of the state are exhausted, for instance, some means of encouraging their replacement should be undertaken. Louisiana has tried this plan with great satisfaction, and the enactment of a similar law is now being advocated in Arkansas. It is to be hoped that Georgia will adopt some definite plan whereby the present hand-to-mouth existence of our institutions may be obviated, their income made reasonably adequate, and

their support placed on a definite basis which will provide for their uniform growth and development.

### A TEN-YEAR BUILDING PROGRAM

If this institution is to expand and serve its constituency acceptably it is clear that a building program of worth-while proportions must be undertaken. A careful study of our needs indicate that the following equipment is essential and should be provided for as quickly as possible. This represents a ten-year building program, at least one unit of which should be completed each year.

Completion of Animal Husbandry Building-----	\$ 100,000.00
Installation of adequate fire protection-----	25,000.00
Purchase of land adjoining College-----	25,000.00
Completion of Veterinary Building and Hospital-----	100,000.00
Removal and construction of adequate power plant----	50,000.00
Erection of Men's Dormitory-----	200,000.00
Agricultural Science Building-----	150,000.00
Extension Division Building-----	100,000.00
Completion of Woman's Building-----	100,000.00
Research laboratories -----	100,000.00
Completion and equipment of Engineering Building-----	50,000.00

Total -----	\$1,000,000.00
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These buildings will all be needed before they can be erected. There are some who may think this is an over-extensive program, but they are not acquainted with the needs of agricultural education or research, nor do they as yet realize or appreciate the growing demand on the part of the youth of the state for training along this particular line.

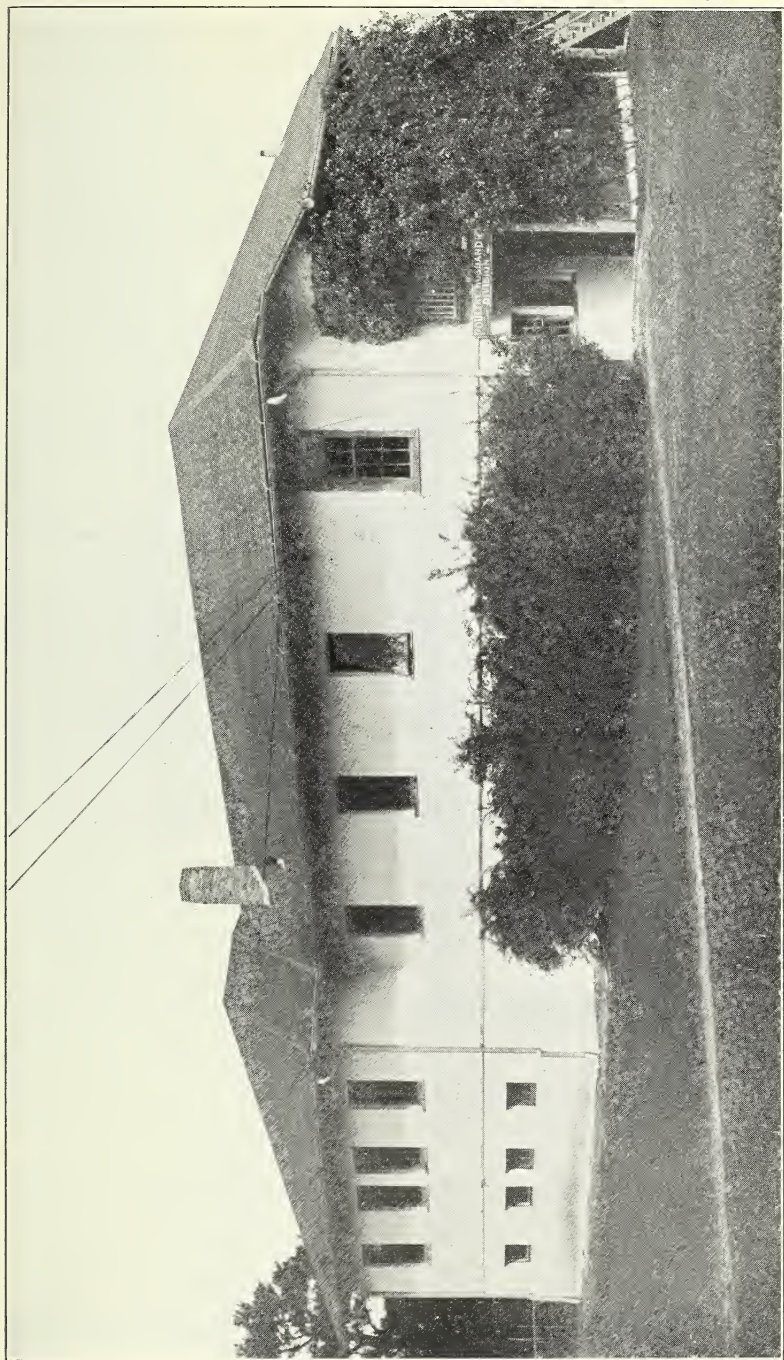
### SOME URGENT NEEDS

Attention has been directed in previous reports to the fact that we have no adequate fire protection in connection with the Georgia State College of Agriculture. If a conflagration were to break out here the chances are that our losses would be extremely heavy. State Fire Chief Joiner has recommended that an eight-inch main be run through the campus and the necessary laterals constructed therefrom. According to the best information available it would cost about \$25,000.00 to accomplish this end.

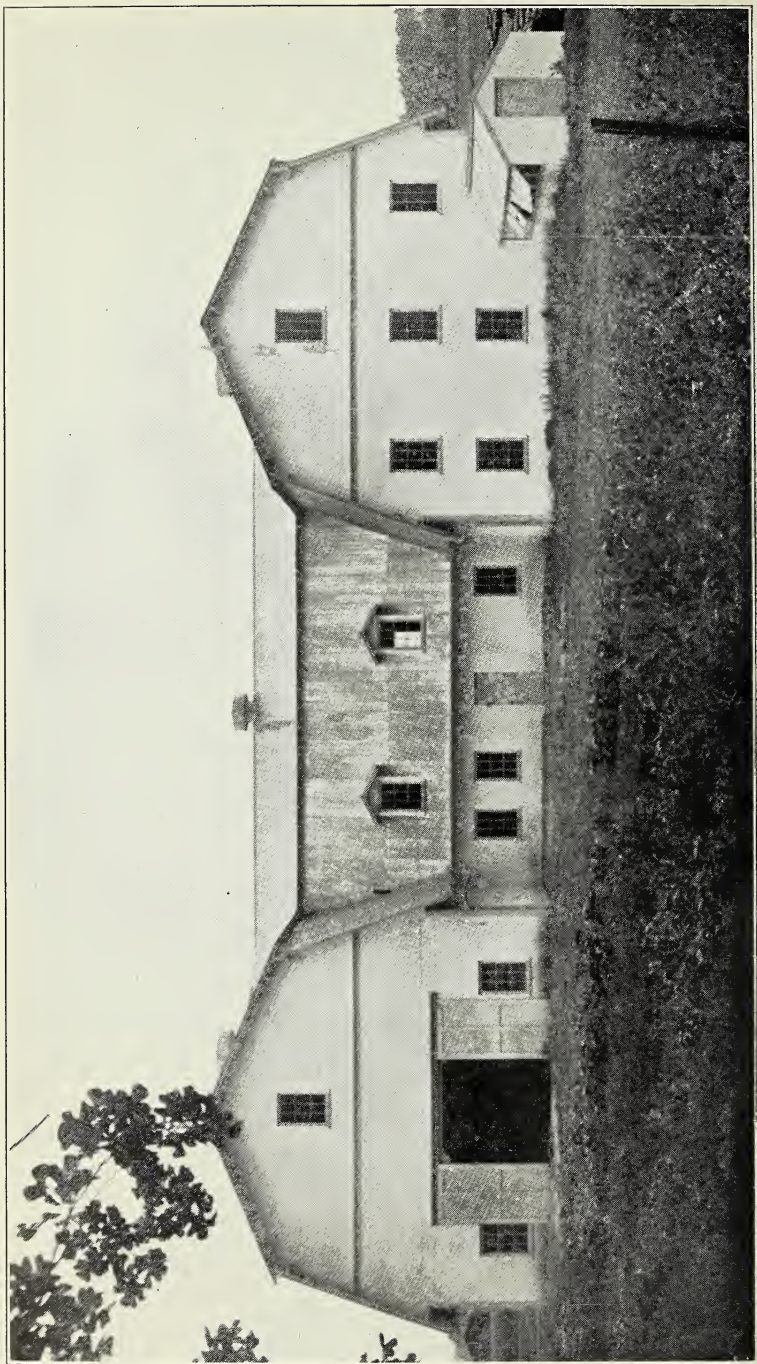
I again direct your attention to the necessity of securing the negro property contiguous to our Woman's Building. The reasons for asking for the removal of this menace need not be enumerated. This property could probably be purchased at a cost of \$25,000.00. It is not only unsightly, but constitutes a nuisance. I feel that the Legislature should be petitioned this summer to provide the funds needed for the purchase of this land.

Your attention is directed to the necessity of our having a repair fund. At least \$10,000.00 should be made available for this purpose. The reasons for seeking an appropriation of this character are so obvious that they need not be further detailed at this time.





*The Poultry Husbandry Building, recently enlarged to meet the needs of the increased enrollment in this division.*



6  
*The new Agronomy barn is one of the most modern structures on the campus.*



## WHAT THE COLLEGE DOES FOR THE STATE

As per your instructions, an estimate of the value of the service work which the College has rendered the state during the collegiate year 1912-1922 has been prepared. While it has always been difficult to place a proper monetary value on the work which we are charged with supervising, we have done the best we could to meet your requirements under the circumstances. It would appear, according to the estimate which has been prepared, that the service work rendered during the year now closing has an aggregate value of \$10,228,920. This represents a return of virtually forty-four dollars for every dollar received from the state. Only a comparatively small part of the funds available for the promotion work which the College has in charge are derived directly from state sources.

The State appropriated \$232,500 to the Georgia State College of Agriculture in 1921-1922. The College returned to the State 44 times as much in actual cash, to say nothing of its educational value. A conservative estimate of the value of its main lines of work is given below.

663	long course students, increased earning capacity -----	\$ 331,500
449	short course students, increased earning capacity -----	44,900
6,338	boys in agricultural clubs added to wealth of state -----	479,505
24,950	women demonstrators grew products valued at -----	759,840
9,591	girls in the clubs grew products valued at -----	303,484
	Total value of products grown by negro boys and girls -----	38,420
42,354	co-operative demonstrations with farmers growing cotton, corn, tobacco, small grains, peanuts, Irish and sweet potatoes, clovers, grasses and forage crops -----	423,540
1,894,423	fruit trees pruned, sprayed, treated for borers, inspected or planted -----	1,894,423
14,919	improved farm implements placed on farms through agents' efforts -----	149,190
96,340	hogs treated with serum for cholera -----	963,400
100,836	other animals treated for simple diseases -----	100,836
	Amount saved by co-operative buying and selling through agents' activities -----	390,442
5,084,160	acres mapped for soil survey work -----	584,160
1,422	soil samples analyzed chemically -----	28,440
127,047	College and U. S. Dept. bulletins distributed -----	127,047
244,893	people addressed at meetings on technical and practical problems affecting the farm -----	244,893
	Results experiments in oil contents cottonseed -----	750,000
233	Extension workers at \$5,000 each -----	1,165,000
	Annual increase in production of varieties of field crops improved by the College. Conservatively estimated -----	1,000,000
79	Extension schools or short courses -----	39,500

2,569 farm buildings constructed or improved----	256,900
boll weevil control work-----	150,000
cheese factory work -----	10,000
tobacco work -----	25,000
Total -----	\$10,228,920

### TO THE UNIVERSITY ALUMNI

To the University Alumni, to the General Education Board, and our friends both far and near, we desire to express our gratitude for their material evidences of interest in our welfare and the generous endowment they have provided. The response made to the drive for funds was a "great inspiration" to all our workers. The liberal contributions made by the Alumni in the face of a most difficult financial situation aroused our enthusiasm and won our admiration. It was a fine exemplification of the biblical text, "By their works ye shall know them."

It evidenced an appreciation of the needs of the University that made a great and lasting impression upon the state as a whole. It was indeed a contribution of love and loyalty to the "Old Mother," as the Chancellor has so frequently and affectionately called the University. It fittingly emphasizes the undying spirit of old Georgia, rich with the memories of fine traditions and noble sentiments more than a century old. It makes certain the completion of a worthy memorial to the hallowed and distinguished dead of the University, who went forth to battle that autocracy might be crushed, the sanctity of the home maintained, and the civilization of the world preserved.

To the Honorable Harry Hodgson, his immediate associates and the boys in general we offer our appreciation and thanks for the fine effort and the splendid sacrifices made on our behalf. It will ever be our endeavor to measure up in service to the high standards which the Alumni have by their example set up for us to follow.

### RESUME

It is now fifteen years since you laid down a foundation program for this institution. It has been a period of uninterrupted growth and progress. As a Board of Trustees you have reason to feel proud of what has been achieved. It is an evidence of what may be accomplished along educational lines by deciding upon a definite policy and adhering to it with firmness and determination. Your courage in the face of the many difficulties which have had to be met and overcome has been an inspiration to all who have been associated with our work. It is quite proper, therefore, to felicitate you on the fact that you have made agricultural education, and this institution as an entity, respected and admired.

It is a great thing to have demonstrated to the farmers of the commonwealth the determining influence which vocational educa-



tion of the right type is destined to exert on the development of the state's chief industry. It is a splendid thing to have been instrumental, as you undoubtedly have been, in winning respect, appreciation and support for a fundamental type of education which had been neglected and all but lost sight of before you took charge of the College.

You have reason to be proud of the fact that during your regency more than 8,500 young men and women have received some beneficial impulses from their association with this institution. It has certainly made some worthwhile impressions on their lives that will never be forgotten. It has brought them in contact with information that will always be of a helpful nature. It has taken them in the immaturity of youth and broadened their vision, and created an impression of the value and nobility of service which is ineradicable. It has helped to formulate their characters on a fundamental basis, and to develop, cultivate and expand the finest motives of their minds. It has helped to broaden their judgment, develop their reasoning powers, and create an idealism which constitutes a primary asset not only to the individual, but to the state and nation as well.

It has helped to teach these men and women to think constructively, to appreciate cultural values, and it has created intellectual habits of thought and action vital to their success. If denied the privilege of functioning through the agency of this institution, these men and women would, to a large extent at least, have failed in the splendid privilege which is now theirs of serving mankind acceptably in the broadest sense and adaptation of that term.

If the state had not placed its forming hand upon them they must have remained in the condition which Addison so aptly described when he wrote that superb tribute to education. "What sculpture is to a block of marble, education is to the human soul. The philosopher, or the saint, or the hero,—the wise, the good or the great man,—very often lies hid and concealed in a plebeian, which a proper education might have disinterred, and brought to light."

If leadership is the great desideratum of the world at this time, then what a splendid privilege it has been to aid in helping to discover, to train, and prepare even a small percentage of the youth of Georgia to aid in bringing about that great transformation in our agricultural practice so essential to the continued welfare and prosperity of our people. Thus the College of Agriculture, standing on Lumpkin hill and overlooking the city of Athens, is a monument to the continuity of purposes by which you have been actuated as a Board of Trustees. It is a living exemplification of the fact that "if we but to our own selves be true, it follows as the night the day, we cannot then be false to any man."

Finally, it is not a mere fanciful picture of the imagination to say that the influence of the College of Agriculture now radiates

from the center to the circumference of Georgia and daily makes thousands and thousands of points of friendly and inspiring contact with its citizenry.

### CONCLUSION

The Chancellor of the University has evidenced that lively interest and concern in all that has affected the welfare of the institution which has always characterized him in the past. He has been a true friend on all occasions, and I know of no nobler or finer tribute which can be paid to any man. Someone has said that his life was best exemplified by a verse written by Prof. Brooke, an English savant, to the following effect:

“So ample is the earth we tread,  
So filled with love and life and fame,  
Ten thousand years have dawned and fled  
And still her magic is the same.

A little love, a little trust,  
A soft impulse, a sudden dream,  
And life as dry as desert dust  
Is fresher than a mountain stream.

So simple is the heart of man,  
So ready for new hope and joy,  
Ten thousand years since it began  
Have left it younger than a boy.”

These lines express the affection, appreciation, and the love I hold for Chancellor Barrow. Oppressed and worried by the unceasing exactions of a difficult office, he has always been cheerful, sympathetic, considerate, encouraging. His uniform support and appreciation of the College have been an inspiration and a blessing to all associated with its work.

The privilege of my close association with you as a Board of Trustees during the last fifteen years represents the greatest treasure which I possess. Permit me to thank you for all your evidences of good will and for the high measure of faith and generous support you have evidenced toward me at all times. It has been a pleasure to serve you to the best of my ability, and I sincerely thank you for the kindly consideration you have extended to me on all occasions.

Very respectfully,  
ANDREW M. SOULE,  
President.

# ADDENDUM A

## Report of the Treasurer of the Georgia State College of Agriculture

### For the Year Ending May 31, 1922

#### RECEIPTS

##### State of Georgia—Maintenance:

Balance College year 1920-1921-----	\$ 7,500.00	
College year 1921-22 -----	86,162.00	\$ 93,662.00

##### State of Georgia—Extension Fund:

Balance College year 1920-1921-----	\$ 3,333.33	
College year 1921-1922 -----	38,059.67	\$ 41,393.00

##### State of Georgia—Farmers' Institutes:

Balance College year 1920-1921 -----	\$ 208.33	
College year 1921-1922 -----	2,406.67	\$ 2,615.00

United States Rehabilitation Work: -----	\$ 68,063.83	
Federal and State Vocational Boards -----		24,444.30
Agricultural Chemistry Laboratory fees -----		681.68
Agricultural Engineering Laboratory fees -----		257.01
Agronomy Laboratory fees and receipts -----		970.85
Animal Husbandry Laboratory fees -----		342.02
Botanical School fees -----		222.75
Forestry Laboratory fees -----		26.67
Home Economics Laboratory fees -----		384.84
Ornithological Laboratory fees -----		273.56
Poultry Husbandry Laboratory fees and receipts -----		4,908.94
Veterinary Laboratory fees and receipts -----		1,351.44
Agricultural Education Laboratory fees -----		28.01
Library fees -----		2,351.40
Matriculation fees -----		5,925.00
General Education Board -----		2,685.00
Quarantine Reservation fees -----		510.00
Contingent Laboratory fees -----		1,394.09
Ornithological receipts -----		2,398.00
Dairy receipts -----		12,505.51
Field Experiments -----		2,815.52
Farm receipts -----		4,615.17
Library receipts -----		11,346.94
Gymnasium fees -----		246.40
Infirmary fees -----		390.00
Non-resident fees -----		425.30

Dormitory rents -----	4,767.33
Interest on deposits -----	1,363.31
Findley Fund income -----	50.00
Georgia Bankers' Loan Fund -----	1,350.00
Fees for Advanced Registry of Cattle -----	1,976.76
Donations for furnishing dormitory -----	532.02
Special County Agents' Fund -----	1,165.00
Sale of Picric Acid -----	2,962.50
Insurance on burned building -----	2,200.00
Contributions for scholarships, prizes, research work, demonstrations, etc. -----	10,741.69
Refunds to following accounts:	
Heat, Light and Water -----	3,249.52
Soil Laboratory -----	15.20
Rehabilitation -----	6.00
Fertilizers -----	429.33
Building and Repair -----	31.75
Insurance -----	18.20
Extension Contingent -----	300.00
Prizes -----	25.00
Extension Traveling Expense -----	.50
Vocational Home Economics -----	.20
Total Receipts -----	\$318,418.54
Less Overdraft June 1, 1921 -----	1,244.62
Available for College year 1921-1922 -----	\$317,173.92

## DISBURSEMENTS

### College Accounts:

(Covered by State Maintenance appropriations, vocational boards' appropriations, federal rehabilitation funds, donations, department receipts, etc.)

Agricultural Chemistry Laboratory -----	\$ 739.91
Agricultural Education Laboratory -----	752.48
Agricultural Engineering Laboratory -----	516.73
Agronomy Laboratory -----	1,254.44
Animal Husbandry Laboratory -----	743.75
Building and Repair -----	1,896.17
Cavalry Unit -----	769.06
Contingent -----	2,506.65
Canning Club Scholarship Fund -----	325.00
Cotton School -----	720.44
Dairy -----	1,371.28
Demonstration Barn -----	5,452.36
Furniture and Fixtures -----	1,406.59
Feed Stuffs -----	3,741.34
Fertilizers -----	1,187.33
Field Experiments -----	3,016.07



Forestry Laboratory -----	470.60
Grounds -----	1,822.68
Gymnasium -----	20.50
Dormitory Reservation Refunds -----	354.60
Furnishing Dormitory -----	166.00
Dormitory Account -----	5,615.47
Findley Fund income loaned students -----	105.00
Heat, Light and Water -----	7,692.63
Home Economics Laboratory -----	1,106.24
Horticulture -----	4,604.94
Horticultural Laboratory -----	501.86
Infirmary -----	489.00
Insurance -----	1,033.10
Janitors -----	808.75
Labor -----	7,190.02
Library -----	2,699.85
Live Stock -----	198.62
Miscellaneous -----	1,592.68
Non-resident fees account -----	1,137.38
Postage and Stationery -----	803.82
Poultry Husbandry -----	5,661.83
Prizes -----	348.48
Publications -----	1,757.43
Salaries -----	51,787.12
Scholarships -----	4,869.75
Tools and implements -----	918.23
Traveling Expenses -----	803.44
U. S. Rehabilitation Work -----	73,504.65
Veterinary Laboratory -----	2,311.98
Vocational Education -----	29,479.09
Student Welfare -----	393.30
Repair Account -----	1,806.40

\$238,455.04

#### Extension Accounts:

(Covered by State appropriations for extension work,  
for farmers' institutes, donations and by department  
receipts.)

Agronomy Equipment -----	\$ 505.72
Agronomy Traveling Expenses -----	1,896.12
Contingent -----	2,420.81
Clarke County Demonstration work -----	5,779.10
Field Experiments -----	1,781.16
Heat, Light and Water -----	589.18
Horticultural Equipment -----	131.99
Horticultural Traveling Expenses -----	1,155.04
Institutes -----	3,123.01
Janitors -----	386.75
Picric Acid Account -----	2,629.80
Postage and Stationery -----	718.36

Salaries -----	22,005.42
Soil Survey Laboratory -----	1,211.40
Soil Survey Traveling Expenses -----	688.61
Traveling Expenses -----	739.92
Poultry Husbandry -----	542.27
Pasture Demonstrations -----	646.85
Publication -----	814.35

\$ 47,765.86

#### Miscellaneous Accounts:

(Covered by donations, revolving funds of laboratories, etc.)

Advanced Registry of Cattle -----	\$ 1,896.67
Bankers' Loans to students -----	1,660.00
Creamery -----	13,821.26
Special County Agents' Fund -----	414.97
Y. M. C. A. Scholarship refunded -----	200.00

\$ 17,992.90

Total disbursements ----- \$304,213.80

Total receipts, less overdraft of June 1, 1921 ----- \$317,173.92

Total disbursements ----- \$304,213.80

Cash balance May 31, 1922 ----- \$ 12,960.12

As against this cash balance are the following:

Outstanding accounts -----	\$ 6,457.24
Rehabilitation accounts -----	2,561.26
Amount to repair heat lines -----	3,500.00
Balance due trust funds -----	3,802.99

\$ 16,321.49

If the above were all taken care of at this time it would show a deficit of \$ 3,361.37

#### FEDERAL SMITH-LEVER ACCOUNT

##### Receipts

United States of America -----	\$161,853.84
Refunds -----	219.21

\$162,073.05

##### Disbursements

Salaries -----	\$123,005.42
Stationery and Printing -----	88.50
Postage, Telegraph, Freight, Express -----	194.72
Supplies -----	984.72
Labor -----	312.63
Furniture and Fixtures -----	63.50
Traveling Expenses -----	28,195.47
Scientific Apparatus -----	13.67

\$152,858.63

Refunds ----- 5 ----- 219.21 \$153,077.84

Cash balance May 31, 1922 ----- \$ 8,995.21

## STATE SMITH-LEVER ACCOUNT

### Receipts

State of Georgia -----	\$ 91,666.63	
Refunds -----	215.00	\$ 91,881.63

### Disbursements

Salaries -----	\$ 61,414.00	
Labor -----	355.30	
Publications -----	3,878.93	
Stationery and Printing -----	1,239.91	
Postage, Telegraph, Freight, Express -----	885.93	
Supplies -----	1,972.85	
Tools and Machinery -----	13.47	
Furniture and Fixtures -----	75.03	
Traveling Expenses -----	13,585.65	
Library -----	3.00	
	<hr/>	
	\$ 83,424.07	
Refunds -----	215.00	\$ 83,639.07
	<hr/>	
Cash Balance May 31, 1922 -----		\$ 8,242.56

## FEDERAL EXTENSION FUND

### Receipts

United States of America -----	\$ 63,272.43	
Refunds -----	85.00	\$ 63,357.43

### Disbursements

Salaries -----	\$ 52,348.31	
Refunds -----	85.00	\$ 52,433.31
	<hr/>	
Cash Balance May 31, 1922 -----		\$ 10,924.12

## FEDERAL PROJECT DISBURSEMENTS

Project 1—Administration -----	\$ 11,265.37
Project 2—County Agents -----	82,415.58
Project 4—Home Economics -----	28,555.89
Project 5—Boys' Club Work -----	17.59
Project 6—Girls' Club Work -----	2,032.87
Project 7—Diseases of Animals -----	37.25
Project 8—Educational Exhibits at Fairs -----	1,500.34
Project 9—Live Stock -----	3,339.20
Project 10—Home Improvement -----	2,597.59
Project 11—Poultry Clubs -----	27.58
Project 12—Agronomy and Farm Management -----	3,666.75

Project 13—Dairy -----	2,389.26	
Project 14—Nutrition -----	4,230.71	
Project 15—Marketing -----	3,924.06	
Project 16—Horticulture -----	4,447.86	
Project 17—Engineering -----	2,410.73	
		<hr/>
Expenditures reported by refunds -----		\$152,858.63
		<hr/>
Total Federal Disbursements -----		219.21
		<hr/>
		\$153,077.84

#### STATE PROJECT DISBURSEMENTS

Project 1—Administration -----	\$ 20,710.66	
Project 2—Publications -----	3,878.93	
Project 3—County Agents -----	7,257.80	
Project 4—Home Economics -----	35,959.61	
Project 5—Boys' Club Work -----	2,997.90	
Project 6—Girls' Club Work -----	396.57	
Project 7—Diseases of Animals -----	960.26	
Project 8—Educational Exhibits at Fairs -----	419.64	
Project 9—Live Stock -----	1,594.12	
Project 10—Home Improvement -----	473.64	
Project 11—Poultry Clubs -----	188.72	
Project 12—Agronomy and Farm Management -----	2,136.48	
Project 13—Dairy -----	854.11	
Project 14—Nutrition -----	891.56	
Project 15—Marketing -----	1,512.37	
Project 16—Horticulture -----	1,758.26	
Project 17—Engineering -----	1,433.44	
		<hr/>
Expenditures represented by refunds -----		\$ 83,424.07
		<hr/>
		215.00
		<hr/>
Total State Disbursements -----		\$ 83,639.07

#### FEDERAL EXTENSION PROJECT DISBURSEMENTS

Project 3—County Agents -----	\$ 39,913.31	
Project 4—Home Economics -----	3,485.00	
Project 5—Boys' Club Work -----	4,575.00	
Project 7—Diseases of Animals -----	800.00	
Project 9—Live Stock -----	200.00	
Project 11—Poultry Clubs -----	675.00	
Project 12—Agronomy and Farm Management -----	2,700.00	
		<hr/>
Expenditures reported by refunds -----		\$ 52,348.31
		<hr/>
		85.00
		<hr/>
Total Federal Extension Disbursements -----		\$ 52,433.31



(The State appropriation covering the fiscal year July 1, 1921-July 1, 1922, was for \$100,000.00, of which \$91,666.63 has been received and the remaining \$8,333.37 will be paid by the State before the end of the fiscal year on July 1st.)

Under the terms and provisions of the Smith-Lever Extension Act, all funds available from State or Federal sources must be spent under definitely approved project agreements between the Trustees of the Georgia State College of Agriculture and the United States Secretary of Agriculture. The expenditures under those projects from July 1, 1921 to June 1, 1922 are given in this report. These figures will not correspond with the report to be made to the Federal government, as its fiscal year runs from July 1st to July 1st and the report to be made to the Federal government July 1, 1922, will contain in addition to these figures, the business transactions during June, 1922.

THE LIBRARY OF THE

NOV 24 1931

UNIVERSITY OF ILLINOIS,

Athens, Georgia, June 7th, 1922.

Trustees of the University of Georgia,  
Athens, Georgia.

Gentlemen:

We have examined and audited the records and accounts of the Treasurer of the University of Georgia and the Georgia State College of Agriculture, including the Smith-Lever—Federal and State—and the Extension Funds and find them correct, all money properly accounted for and the system of accounting excellent. We proved all cash on hand by actual count and bank balances by comparison with banks.

We were extended every courtesy by the Treasurer, Mr. T. W. Reed, and we had his full co-operation throughout our work.

We commend Mr. Reed for his accuracy and the systematic manner in which he keeps his records.

Very truly,

(Signed) TOM WISDOM,

(Signed) JAMES A. NORTHCUTT,

State School Auditors.

The books and accounts of Mr. T. W. Reed, Treasurer of the University of Georgia and the Georgia State College of Agriculture, were carefully inspected and audited July 20-30, 1921, and found to be correct, and kept in accordance with the terms and provisions of the Smith-Lever Act. Auditors: H. E. Savely and J. E. Conway, of the State Relations Service, United States Department of Agriculture.















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